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THE MEANING OF SOCIAL SCIENCE

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THE MEANING OF SOCIAL SCIENCE

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These lectures were heard by a company of graduate students drawn from all the social science departments. In variety of viewpoints a group so made up fairly represents the larger public to which appeal is now taken. The argument is addressed to all thinkers who are mature enough, both mentally and morally, to recognize the complexity of social problems.

The lectures are printed just as they were delivered. If transitions from technicality to colloquialism are occasionally rather abrupt, they are merely cases of academic freedom in sacrificing elegance to force.

A. W. S.

THE UNIVERSITY OF CHICAGO
June 15, 1910

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LECTURE I

THE UNITY OF SOCIAL SCIENCE

Several years ago it occurred to me that more ought to be done in the way of defining the things which the students of social science have in common. I was impressed by items of evidence which came to me with monotonous rhythm, that students in our own social science departments were not turning the opportunities afforded by our rather minute division of labor to their best advantage. Instead of using the means available for getting a wide survey of the field and of the methodology of social science in general, the typical graduate student in social science is satisfied to confine himself rather closely within the bounds of two departments. The consequence is that he is unfortunately provincial about social science as a whole.

It seemed to me that the work of our social science group would be much more intelligent if every candidate for the degree of Doctor of Philosophy in social science should survey the whole field of social science some time during his graduate years, from the standpoint of each grand division of social science, and under the guidance of a representative of each division.

As my own contribution to such opportunity, I announced a course of lectures, intended particularly for graduate students in social science, and aiming to exhibit the interconnections of problems in social science as they appear from the sociologists' viewpoint. The hearers whom I had in mind were those graduate students who did not elect courses in the Department of Sociology. It was, and still is, my hope that the other departments in our social science group may from time to time offer similar surveys from their particular standpoints. If even these meager reports of the schemes of labor employed by the several departments should receive due attention from the graduate students of all the departments, the effect could not fail to be liberalizing.

My announcement of a course of lectures once a week for a quarter stood several years in the group circular, but it appears to have been an offering for which there was no demand. As the preparation of the lectures would have cost neglect of other work, and as I could not be sure that the things left undone would be less important, I had no sufficient motive for carrying my theory into practice.

This year, however, some of the graduate students took notice of my announcement, and called on me to fulfil my promise. After having received assurance that there would be enough hearers to make the experiment respectable, I very gladly took up the work. In order to be able to say in fifty-five minutes enough fairly to outline the aspect of the subject treated in each lecture, I shall be obliged to write out my discussion in full, and to read it carefully, in preference to adopting the conference method. The latter manner lends itself, in my case at any rate, to elaboration but not to compression.

Although these lectures will be written, they will not be formal, and of course they can be only a sketchy treatment of the general subject of the series. They will be virtually very summary and superficial talks about a theme which could be treated exhaustively only in a number of volumes. This does not mean that I shall present hasty thinking. What I shall say has been taking shape and changing shape in my mind over and over again since I began as a college student to puzzle over some of the relations which I shall discuss. Only the expression of the thought will be extemporized from week to week in the fragments of time that my other work will allow for putting the argument on paper.

The lectures will contain a good deal of repetition; repetition not merely of things which are the stock ideas or phrases of all who have studied sociology in the restricted sense, but repetition from lecture to lecture of leading conceptions which must recur throughout the course. These conceptions indeed indicate the associations of ideas which, the sociologists maintain, correspond with the correlations of reality. It is a large part of the sociologist's function in social science, as he sees it, to win for these ideas their due share of attention. He does not believe that it will always be necessary for sociologists or anyone else to harp on these ideas as insistently as the sociologists find it needful now. He hopes and even believes that many of the categories for whose meaning he is now obliged to contend will some time have passed into the fund of authoritative commonplaces which may be scheduled as the "lapsed intelligence" of social science. He anticipates that they will some time have so passed into the habits of thought in social science that no one would think of disregarding or even of debating them, any more than we would debate whether the multiplication table is invariable.

Meanwhile we are in that stage of scientific juvenility in which we are groping rather unsystematically after the axioms of human experience. I have chosen ten points of departure at which to drive down stakes for preliminary surveys in social science. In each of the lectures I shall have the whole field of social science in view, and shall try to make it visible to my hearers. At the same time I shall try to make it self-evident that I am asking you to fix your eye on the particular stake to which the lecture is devoted; and in each case I shall try to help you visualize the whole area of social science from the outlook of that particular stake.

As intimated just now, the original announcement of the course spoke of it as intended principally for graduate students who had not elected courses scheduled in our announcements as sociological. I have sketched these lectures in accordance with that plan. They will avoid minute sociological technicalities. They will attempt to furnish an available introduction to sociological conceptions for graduate students in other divisions of social science who know sociology only as it is criticized or ignored in their chosen departments. Everything that I shall say will therefore be threadbare for students of sociology. Yet, while I shall try to put what I have to say in a shape that will carry its meaning to the historian or political scientist or economist or psychologist who may never have taken sociologists seriously, I hope the very fact that I have sharpened these particular stakes, and am using them as landmarks, will help the sociologists to arrange their ideas in a more controllable way.

Not merely in the present lecture on the unity of social science, but throughout the course on the more general subject, *The Meaning of Social Science,* I shall virtually elaborate the thought which I suggested in a paper entitled: "The Sociological Stage in Social Science." It was published in the *American Journal of Sociology* for March, 1910.

To the man who is not a sociologist, the people who call themselves by that name seem to be more or less cheerful or cheerless cranks. The sociologist is supposed to have one or more wheels in his head that revolve in tracks totally outside the realm of real knowledge. Nobody quite understands how the sociologist smuggled himself into good society, and very few are ready to admit that there is good and sufficient reason for his remaining. But here he is; and he is almost as much puzzled to give a clear account of himself as the onlooker is to understand it when it is given.

At all events, one thing seems generally to be taken for granted, namely, that sociology and sociologists are something outside of and apart from the orthodox and standard social sciences. They are a sort of alchemy and alchemist quackery and quack in the field of human physics, or a species of faith-healing and faith-healers in the realm of social physiology. They are not angels that have fallen from the scientific heaven, because they were never in it.

All this would be amusing if it were not so pitiful. This attitude toward sociology is really a self-indictment by everyone who maintains it. It is a betrayal of amateurishness and unsophistication which would be fatal if it were not supported by such a big inert mass of like-mindedness. In such a numerous company it can persuade itself that its ignorance is superior wisdom.

I want to have it distinctly understood at the outset that I shall say not a word in this lecture that might not be said from their own point of view by historians, political scientists, economists, psychologists, or philosophers. There is nothing freaky about the things that I shall say because they happen to be said by a sociologist. In some form or other they are taken for granted, or implied, or even spoken out somewhat frequently by social scientists of all denominations. One of the commonplaces which I shall emphasize presently is that the common property of all the social sciences in these propositions upon which I am laying stress ought to show that sociology is not so clearly an Ishmael in social science as is rather generally supposed.

On the other hand, the same thing has its other side. The incredulous may feel themselves confirmed in their incredulity by the resort of sociologists to assertion of commonplaces. The inference is: unless sociology has something more distinctive than that to say, it has no sufficient reason for existence.

I shall return to this claim more than once in this and the following lectures. At present I state the general reply in this form: the first—not the only—peculiarity about the fact that these almost axiomatic things are said by the sociologists, and about the ways in which they are said, is that they are valued by the sociologists as worthy of sustained attention, not merely of rote utterance. The sociologists hold that we have not dealt with them in accordance with their importance when we have curtly nodded at them and passed on without further notice.

There is a sense in which Professor Carver of Harvard is right, that "sociology is a science of left-overs." It is the same sense, however, in which the operator of a brick kiln would be right if he said that the mason's trade is a knack of handling left-overs. From the brick kiln point of view, mortar and its manipulation in fastening bricks together might be called left-overs. Without these left-overs, however, the bricks would not stick together long enough to place the rafters for the roof of a one-story cabin. The left-over mortar and masonry are all that keep the bricks themselves from being left-outs.

Without exaggeration or impertinence, I might adapt to sociology the biblical figure, "the stone which the builders refused, the same is become the head of the corner." That is, I do not hesitate to claim that the one central thing for which the sociological movement in social science is significant is necessary in order to give social science as a whole a thoroughly first-rate meaning.

If I claimed nothing more for sociology, this would be enough to call for a new lining-up of all the social sciences, with their attention fixed on the neglected element in their situation. They all know the thing that they neglect. The sociologists are undertaking to make them know that they may no longer neglect it. Whatever else may be true or false about sociology, its reason for existence is something which does not shut it off nor set it apart from other social sciences. On the contrary, its essence is an assertion which must be the center of all sane social science, namely, that *knowledge of human experience cannot at last be many; in the degree* *in which it approaches reality it must be one knowledge.*

It may take a thousand or a million words to state what we know about a given occurrence, say the San Francisco earthquake; but after all the use of thousands or millions of words to convey our knowledge does not make the occurrence itself many. It merely exhibits the clumsiness of our machinery of knowledge, the contrast between our symbolism of representation and the objective occurrence, the approximateness of our intellectual reproduction of objective processes. The thing to be known is one connected whole. Complete knowledge of that whole would be a single co-ordinated achievement of the mind. Anything short of that is the mind's plodding along toward that completed achievement, or more or less distracted postponement of the achievement.

Sociology is really assuming the same prophetic rôle in social science which tradition credits to Moses in the training of his nation, when he sounded the keynote, "Hear, O Israel! The Lord our God is one Lord." Or the rôle of the rallying cry of Islam, "There is but one God and Mahomet is his prophet!" Of the rôle of all unitheists, against those exaggerators of aspects of their conceptions of divinity who went so far as actually to set up a tritheism. Or the rôle of those modern psychologists who saved us from that mental philosophy which turned the human mind into a department store with devices for opening and closing impenetrable partitions between the divisions of intellect, sensibility, and will. Sociology is like each of these unifying alternatives in the one particular that it is proclaiming the elementary truth of the unity of the social reality, and the consequent unity of all the divisions of science that may be invented as machineries for understanding the reality. It would not be true to say that the sociologists from the start have been conscious of their prophetic office, or that they have had an unequivocal message, or that they have stuck consistently to a single text. Like nearly every other group of thinkers, the sociologists have more or less blindly felt their way toward their real function. It would be unreasonable to demand that the men who began the process of getting a more adequate statement of the problems of human experience should have seen its end from the beginning. We may see very plainly now, however, that underneath the impulses which were bringing sociology into being there were partial premonitions of the truth which is now central. The progenitors of sociology were strongly influenced by the feeling, if not by the formula, that human experience is somehow an interlocking affair. They at least acted in the direction of the belief that attempts to know human experience will be relatively abortive until they resolve themselves into an interlocking system of knowledge which shall fairly reflect the interlocking systems of activities to be known.

By what right, then, do we demand that students of the social sciences shall rank themselves as students of one science?

Simply by right of the discovery that the reality with which we are in contact when we try to analyze a phase of human experience is a reality which is interconnected with all other phases of human experience. Pretension of knowledge of the reality must consequently be ignorant and impudent if it is not a kind of knowledge that fairly reflects the blendings of the many unlike phases of activity in the reality itself.

When I had written to this point, I found myself puzzled about the next step in the discussion. The sort of illustration that is most in point is utterly trite to everyone who has had even a slight acquaintance with sociological literature. On that account I hesitate to repeat anything so familiar. At the same time these necessary and obvious illustrations do not readily reveal their meaning, or at least their importance, to anyone whose vision has not long been adjusted to the sociological point of view. I fear the brief use of the material which the time allows will not amount to much, but I will do my best to indicate the essence of the situation.

Whatever our place of observation in the social sciences, historical perspective is a part of the birthright of our generation. All of us not merely admit, but we insist, that conditions are what they are, and events occur as they do, because a long chain of antecedent conditions and occurrences have set the stage and furnish the motives. All of us look upon anything that arrests our attention as a historical effect of historical causes.

Now let us see what this involves for our fundamental conceptions of social science. I will take for illustration the case with which I am most familiar.

I distinctly remember when the whole civilized world—whatever the particular interests and sympathies that might have wished otherwise—felt an undercurrent of pity for those misguided boors on the other side of the Rhine, those quarrelsome, beer-guzzling barbarians, who were being led by that swashbuckling Bismarck to certain annihilation by the refined, scientific, skilful, and altogether superior French. It was a case of matter against mind, of brawn against brain, of petty inexperienced provincialism against a cosmopolitan imperial solidarity. The outcome could not be in doubt.

How do we now explain the miscalculation of the civilized world? Of course, I am referring to the general popular impressions, not to the contrary judgment of a better informed few. Why, we say the world did not know the real history of the two countries.

Very well; so far so good. But what is the real history of the two countries? Is it the things set down in the books written by men called historians, and that are on the shelves labeled history in our libraries? If so, then I assert not merely that the histories in existence in 1870 did not furnish a sufficient basis for a different judgment, but that those written since have not fully satisfied the requirements.

What is the history of a country? To avoid confusion, and to distinguish between history in the sense of the literary reflex of what has objectively occurred and history in the sense of the objective occurrences themselves, I will use the term *experience* as a synonym for the latter meaning. I will refer to Germany alone in the rest of the illustration.

The experience through which the Germans ceased to be what they were in the sixteenth century, and became what they were in this decade of "Dreadnaughts," the experience which had not advertised itself very generally to the world in 1870, consisted very largely of occurrences which either are not mentioned at all in the histories in the current sense, or if they are mentioned are not so connected up with the total process of the experience that their significance as functioning factors gets its necessary explanation and appraisal.

It is superfluous for me to confess that it would not be within my power to write a history of Germany. I have not even attempted to write a complete account of the one thin strand of German experience which I am studying for a special purpose. In tracing this one strand, however, I have come upon evidence which I had no thought of looking for, tending to confirm my main thesis about the oneness of the social sciences. If I had attempted to find more factors which entered into the experience, the list might doubtless be considerably enlarged, without resort to minute subdivision of the factors. Naming merely the effective influences upon the Germans which I encountered while studying a single line of evolution in German theories of social science, I am able to present a schematic picture of the experience through which the Germans of 1510 became the Germans of 1910. I have scheduled the objective circumstances or occurrences in a column with odd numbers, while the parallel column with even numbers contains titles of corresponding subjective factors. (See table.) The order in which the factors are listed is not intended to represent a hypothesis about their relative importance.

To bring out the full meaning of this schedule, it should be changed into a diagram. From the title representing the original persons, lines should be drawn representing afferent and efferent channels reciprocally connecting those persons with each of the twenty-five factors in the list. Similar reciprocating currents should be represented between each of the twenty-five factors and every other. All of these currents should be represented as converging in the lower title standing for the persons who are the temporary resultant of the experience.

We must remember that each of these factors numbered up to twenty-four has had a continuity so unique that relays of persons might spend their lives upon either of them, and might find that the

THE GERMANS OF 1510

1. Their physical make-up.
2. Their standards of physical welfare.
3. Their physical environment.
4. Their technique of physical exploitation.
5. Their social antecedents.
6. Their folklore.
7. Their political institutions.
8. Their political theories.
9. Their established private law.
10. Their theories of private rights.
11. Their fund of knowledge.
12. Their scientific methodologies.
13. Their ecclesiastical institutions.
14. Their theologies.
15. Their economic institutions.
16. Their theories of industry.
17. Their *mores*.
18. Their general philosophy.
19. Their aesthetic self-expressions, including literature.
20. Their theories of art.
21. Their educational institutions.
22. Their theories of education.
23. Their contacts with other civilizations.
24. Their theories of international relations.
25. Incessant mutations of these factors, as they combined in the personality of individuals or groups representing countless combinations of interests.

THE GERMANS OF 1910

task of tracing the process of succession in each case was at last hopeless. We must remember too that the innumerable situations in the group indicated by the number twenty-five all need explanation by the help of the twenty-four factors, and each situation in the innumerable group twenty-five might contain evidences that would modify previous impressions about the order of experience in one or all of the twenty-four factors. We must remember further that this list of twenty-four factors is not the result of a thorough analysis of the experience as a whole. It is merely the result of examining a very obscure current in the experience, and it testifies only to the influences which were found at work in that area.

What does the illustration bear on its face?

To answer the question I assume agreement about the major premise that the *main function of the social sciences is to make out the meaning of human experience.*

I know that there are all sorts of side-steppings to avoid this exacting principle. It condemns great masses of frivolity that thrive unrebuked under the name of one or other of the social sciences. I have even heard an eminent American historian make an assertion in public which I should be glad to be convinced that I had misunderstood. He did not sufficiently explain himself to remove the impression that he had said, "History need not even be true, if it is only artistic." Other social scientists actually turn social science into a lobbyist for special interests. Even these usually have a way of convincing themselves that service of their special interest is the genuine way of making science the interpreter of life.

Assuming the major premise, then, that the *main function of the social sciences is to make out the meaning of human experience*—and even in the case of men who pervert the principle to thoroughly selfish uses, it has some value in *ad hominem* argument—what does our illustration bear on its face? What does it show us that the experience was, through which the Germany composed of several hundred camps of as many Wallensteins, eating the food of herds of bovine peasants, while they spent their time fighting each other for ownership of the peasants that produced the food—what was the experience through which this Germany became the Germany of our day, in some respects the most intimately interwoven co-operative commonwealth the world has ever seen? What was this experience?

Well, on the face of the returns it was the interplay of at least twenty-four principal factors, each single one so complicated in its sources, its evolution, its reactions under shifting conditions, that knowledge of one of these factors alone is likely to be at best very largely hypothetical, conjectural, speculative, or at any rate fragmentary. Highly trained and experienced skill is needed to guard against the most glaring errors in explaining the part that either of these factors plays at a given time—not to say from the beginning to the end—in its reactions with all the other factors.

But this is not all. *The part that one of these factors plays at a given moment is a function of the operation of all the other factors at the same time.*

If then it is so hard to get an all-sided knowledge of one of these factors alone, where shall the knowledge come from that will credibly put all the other factors in their working relations with a single one which a specialist may approximately understand as an abstraction? Must it not come from an intelligent division of labor upon each of these factors—treated in full view of the perception that it is a factor, not a separate existence; and must not all these fragments of knowledge be assembled and fitted together—

somewhat as in the case of the parts of a puzzle picture?

The last analogy might perhaps be carried out at considerable length. That is, we may have a piece of knowledge about either of these factors. It may interest us very much. We may have a very high idea of its importance. So long as we hold it apart by itself there is very little to challenge our estimate. But the moment we begin to fit it into the knowledge that other men have gained of these other factors, we are likely to find that our solitary estimate is very far from the truth. The item which we have rated as a first-rate factor may shrink to the dimensions of a twenty-fourth rate factor; on the other hand, the exact reverse might occur.

In a word, therefore, the illustration carries on its face the implication that there must be team-work between the social sciences, if they are to advance from the rank of boys' play and constitute serious social science.

A passage of human experience, like the one I have taken as an illustration, is as real as a chemical reaction. It is millions of times more complex than a chemical reaction. The task of the social sciences is primarily to find out just what occurred, and secondarily to find out the process of the occurrence, and the meaning and the value of the occurrence; just as it is the task of chemistry to find out what occurs, and the process of the occurrence, and the meaning and value of the occurrence, when some iron filings and some hydrochloric acid are together in a test-tube.

It is the task of the chemist to find in the reaction in the test-tube a fraction of universal truth. In a parallel sense, when we confront a passage of experience such as we have taken for illustration, *our task is to discover what occurred in that experience which has a significance for all human experience everywhere.*

Since the occurrences contained in a given experience are a composite of all the separate factors that co-operated, we degrade social science into a vaudeville program if we act as though we could work out historical stunts independent of economic stunts, psychological stunts detached from political stunts, etc. The human experience to be interpreted is a unity. The sciences that undertake the interpretation must begin by constituting themselves a unity.

I have already indicated the sort of unity I mean, namely, not a unity of duplication, but a unity of team-work.

I would not too directly anticipate the phase of the subject that I shall talk about in the next lecture, viz.: "The Disunity of the Social Sciences." The general thesis will be that, strictly speaking, we have no social science yet which deserves much respect. We have developed merely a number of techniques, historiography, statistics, psychological analyses, etc. We have not done very much, measured by the complexities of the experience to be interpreted, in the way of organizing these techniques into an apparatus of discovery adequate to the tasks.

To illustrate what a real process of discovery would involve, I will suppose that the members of the social science group in our own university, for example, decided to investigate the meaning of the process by which the old Germano-Roman imperialism first resolved itself into the four-hundred-fold particularism of Germany beginning with the Reformation, and the further process by which, after the breakdown of particularism in the Napoleonic era, decadent particularism transformed itself into the new imperialism of the modern empire. If our academic group were intelligently class-conscious, as the socialists would say, we should forget the departmental partitions that turn academic halls into dolls' houses. Twenty-four or more of the philosophers, and psychologists, and cultural and political and church historians, and lawyers, economists, sociologists, etc., would become responsible for running down the evidence, each for one of these twenty-four strands woven into the web of the experience, and each would try to learn from the others how his particular strand was woven with the other strands so as to make up the complete experience.

We have to assume, of course, for the sake of the illustration, that the material necessary for carrying out such an enterprise would be accessible. The remainder of the instructors in the group might still devote themselves to instruction of beginners in the use of the different scientific techniques, and to the selection of promising candidates for more advanced training as investigators.

The group of twenty-four or more men enlisted in this co-operative investigation would keep constantly in touch with one another, in order to trace each his strand better by making sure at every moment that its connections with the other strands were not mistaken.

After five years or ten, the results would not be either of the academically disjointed sciences represented by individuals in the co-operating group. *The synthesized result would be an organic body of social science; a knowledge of a section of the experience of men in association.*

I will sum up what I have said, with a different order of statement and with slight variations of form.

In the first place, *human experience is a connected whole.* If we divide it into unrelated parts, between which we recognize no effective interdependence, we do violence to it just as we should if we arbitrarily dismembered objects of nature and constructed "sciences" of their scattered parts. Suppose we assumed that trees are not trees. Suppose we imagined that instead of trees, as trees, there is one independent existence under ground, another from the surface of the soil to the first branches, another from the first branches to the topmost and outmost twigs. Suppose we proceeded to construct "sciences" of tree roots, and tree trunks, and tree branches in turn. The result would be three abortions.

Just as we must organize our science of trees in another way; just as we must try to learn about trees as wholes; just as we must learn not merely the wholeness of individual trees, but the relationship of trees to the whole plant world, and the relationship of the whole plant world to the whole inorganic world, or else we deceive ourselves with the idea that we have a respectable science of trees—so it is with social science.

In the second place, I might have put the argument in this form: Since human experience is a connected whole, just as the different functions of plant life and the different dependencies of those functions upon the conditions of surrounding inorganic life are a connected whole, so valid and responsible science of human experience, like valid and responsible science of plant life, must be constructed by finding the actual working relations in this connected whole of human experience, and getting them charted in these vital connections. Valid social science cannot be a go-as-you-please race to seize something interesting in past or present human experience, and get that named as a winner in the speed trials. Valid social science cannot consist of catch-as-catch-can wrestling bouts with problems of human relations, as they happen to be presented by conventionality or intellectual fashion, or by the opportunism of a passing stage of civilization. Social science will be merely mythology sicklied o'er with a rouge of realism, until it truly reflects the actual web of processes in human experience—just as there was no astronomy, till the Indian and Greek and Norse and other mythologies ceased to substitute fantasies in men's minds for actual computation of the movements of the heavenly bodies.

In the third place, I have taken as an illustration a sample portion of human experience—the development of the Germans from 1510 to 1910—and I had in mind particularly the brief period from the culmination of Frederick the Great's "benevolent despotism" to the beginnings of the struggles for constitutionalism after the battle of Waterloo. I said that without going very deep into the record I had found twenty-four factors at work in the experience of the Germans at that time. From my contacts with these factors I conclude that each of them would furnish problems enough—genetic or analytic—to exhaust the resources of one species of investigators. I have insisted that a respectably scientific report of this German development, as a typical treatment of all similar passages in human experience, would have to furnish an explanation of the part played by each of these twenty-four factors *in terms of all the other factors with which each was in co-operation.* I might have added, instead of merely hinting, that the pretentious histories which have been written about portions or all of this experience would not pass a very brilliant examination if tested by this standard. If we should make the requisitions upon them which mere speaking acquaintance with these leading factors would enforce, we should find that, considered as conclusive science, in the sense in which physical scientists understand the term, there is not such a tremendous amount to say for these dignified histories, in distinction from Carlyle's *Frederick the Great,* or Louisa Mühlbach's novels.

I might add that, if there were time, or if it were necessary, to support the generalization which I merely illustrate by this one case, I should go to the historians themselves, I should not ask you to take the word of a sociologist. I should not profess to be better able to judge what belongs to conclusive history than the historians themselves have long ago discovered. If you want to get an idea of what is stirring in the minds of historians today, which makes the sociologists say, "I told you so," which makes the sociologists say, "Haven't we predicted all along that sooner or later they will have to bring into the reckoning factors which they have treated as too petty to be bothered about?"—if you should want exhibits of these changed or changing attitudes among the historians themselves, read the address of Professor Robinson last year to the faculty and students of Columbia University, on the position of history in social science; read the presidential address of Professor Adams of Yale University at the 1908 meeting of the American Historical Association; read the plans of Lamprecht's historical institute at Leipzig; look up Kurt Breysig's explanations of the methods he is introducing in his historical seminar at Berlin; or see it all summed up in Bernheim's latest rendering of the scope of history. Here it is: *Historical science is the science which investigates and exhibits the temporally and spatially bounded facts of the evolution of men in their singular as well as in their collective activities as social beings, in the correlation of psychophysical causation.*[1]

There you have it. The fact that Bernheim claims the whole for *historical* science does not feaze me in the least. What it will be called when we get it is the slightest of my troubles. The main point is that this most prominent historical methodologist in the world sees the task of all social science as historical science, but he sees it just as I am urging that every sane mind must see it, when we really get sane, as *a unity of psychophysical interconnections.*

Call it history or what you will, the gist of it is that it is UNITY, and our lucubrations about the meaning of life are only more or less respectable philanderings until they are organized into a scientific unity which veraciously reflects the objective unity.

[1] Bernheim, *Historische Methode* (ed. of 1908), 9.

Once more I have put emphasis on the fact—which the last point has also illustrated—that although I am speaking from the standpoint of the sociologists, I am not professing to say things which are peculiar to the sociologists, or known only by the sociologists. The precise contrary is the case, so far as I have gone. I shall say things later which men in other parts of social science deny. All that I have said, and all that I shall say in the second lecture, has been said over and over again by men who spoke from the standpoint of each of the other departments of social science. The chief difference between them and me is that they think these things are so true that they will take care of themselves, even if everybody neglects them, while I think they are so true that they deserve to be lined out to all students of social science till they are in as common use as the alphabet.

Finally, to avoid possible misapprehension of my argument, I must restate the conclusion which I draw from the necessary unity of social science. I am by no means contending that *sociology* is identical with that unified social science. All I assert is that the sociologists have something to say which is bound to be one of the factors in organizing that unified social science. I do not know, and I do not much care, whether anything or anybody will answer to the name sociology or sociologist a hundred years from now. For all I know, the same sort of change may take place which relieved the term "rhetoric" of most of the meaning that it once had. The term "rhetoric" once covered all that was known or supposed to be knowable about human relations. A like change may send all our present labels in the social sciences to the glossaries of archaic terms. This matter of names is too trivial for grown men. I am not even concerned to claim that sociology will have a separate designation or a separate existence a hundred years from now. It may be wholly absorbed and distributed among the different parts of the science which by that time may be unified around the discovered center of gravity of human experience. However that may be, this is the gist of the whole matter: *So long as you are likely to live you will be blind leaders of the blind in social science unless you have learned to give a fair hearing to the things which the psychologists and the sociologists are bringing out into prominence.*

LECTURE II

THE DISUNITY OF THE SOCIAL SCIENCES

The stake that I have to drive down now is this:

Between the so-called social sciences today there is no team-work worthy of the name of science.

Now, do not understand me to claim that sociologists are less guilty than other people of the faults that lie behind this condition. We are all human together, and if the actual transgressions which may be charged up to the sociologists under this head are fewer in number than those of the other sciences, it is because the sociologists are fewer and have been a shorter time in the world. Even at that, I can assemble from my own personal knowledge enough cases among the sociologists of failure to co-operate with one another to offset anything of a similar sort which I might illustrate from other branches of social science. Living in a glass house, therefore, I am shy of throwing stones. Besides, I am not engaged in a holier-than-thou propaganda. I am pointing out a worldwide trait of our pre-scientific period. In our social sciences the world over, we have all the pretensions of science but only the beggarly elements of its processes.

When I have said things like this where they led to a friendly fight with men of other standpoints, they have always come back at me with some variation of the reply, "Oh, you are behind the times! You are thinking of five or ten years ago! We have changed all that! You simply have not kept up with the procession! You are talking about men of straw! Wake up and see things as they are!"

Well, let us look at things as they are, but do not make the mistake of charging me with saying that we are not making progress all along the line in the social sciences. While I could not speak as an expert, of course, I have enough layman's knowledge of what is going on in a score of major and minor social sciences so that I would not ask an easier task than that of showing that splendid progress has been achieved in the last decade in every one of them. By comparison with past attainments I can eulogize each of the social sciences as enthusiastically as anybody. I am comparing what we are now doing in the social sciences with the sort of campaigning which our present insight into human relations makes it our duty to plan. I am saying that in spite of all we have accomplished, we are doing comparatively nothing in the way of concentrated team-work between the social sciences in organized investigation.

No! Whether progress has been made in the special divisions of social science is not the point. Whether progress costs poverty in the industrial world or not, there is progress in certain aspects of science which amounts temporarily to increasing poverty of spirit. One of the initial consequences of the division of labor in the sciences is precisely parallel, in its effect on the laborer, with the consequences of the division of labor in manufacture, which economists have observed almost ever since there has been division of labor. In the scientific case, the consequences are in one respect relatively worse. In science, we can have no manager to correlate the work of the specialists. The consequence is, therefore, narrowing both for the worker and for his output. Specialization in the sciences means a subsequent pre-scientific period of provincialized science. It is that stage through which the social sciences are passing today.

We need not go back into ancient history to show this. I leave all that sort of evidence out of the account entirely at present, and I ask you to look at the case from an entirely different angle.

After I had been trying to teach history and economics for seven years in a country college, I spent my first Sabbatical year at Johns Hopkins University. The organization of graduate work there at that time arranged all the students in the social sciences in one group of courses. Some of the courses were two hours, others three hours a week. All but a few were given in a dingy old garret called the seminar room. There was a long table at which perhaps thirty of us had our appointed places, and from nine until twelve, five mornings in the week, all of this thirty heard the same lectures and took part in the same discussion. First a historian would have us, then an economist, then a political scientist, or a sociologist, or a lawyer. When a specialist in either of these fields, or in some division of practical social affairs, came from Washington, or Philadelphia, or New York, to talk to the seminar, faculty and students pooled their critical equipments, and in the interest of an all-around view of the subject attempted to test every man's theory from all the standpoints represented in the group. Professor Bloomfield came from the philological side to represent ethnology, and he did it in a way to put everybody on his guard about historical conclusions that did not reckon fully with the racial factor. Professor Gildersleeve, from the

Greek department, was a vigilant censor over any prematurities about ancient history. The one conspicuous lack was the absence of a masterful psychologist. Professor G. Stanley Hall had just gone to Clark, and his place had not been filled.

The beauty of the situation was that men who looked at human experience from a dozen different angles, and had as many distinct theories of the combination of methods by which the interpretation of human experience should be undertaken, each had a chance at us. We were a sort of jury in an academic equity case. We had to make up our minds about the ratio of value in the different claims, as presented to us by the claimants themselves—not by prejudiced third parties.

Now I should like to know what you think of the comparative chances of getting an all-sided view of the unity and comprehensiveness of social science in an environment on that model, as contrasted with the system of pretty nearly water-tight compartments into which every other American university, so far as I can learn, has been tending to divide the social sciences.

For various reasons, the picture that I have drawn of Johns Hopkins University twenty years ago would be less accurate as a description of the larger part of the intervening period.

Assuming men of equal abilities, would you go for the most intelligent introduction to social science to a group of scholars that divided itself up into a series of non-communicating subgroups, in which a breeding-in-and-in process was cultivated, where each subgroup practiced its own critical technique from its particularistic viewpoint, with precautions against contagion from groups occupying a different ground? Would you expect, under these latter circumstances, to get a balanced conception of the most complicated relations that our minds encounter; or would you choose to go to a group where there was a continual comparison of one viewpoint with another, and the constant co-operation of conflict to decide in a free forum how much of this view, and how much of that, and how much of the other could maintain itself as a legitimate way of entrance into the unity of the common subject-matter?

To ask the question is to answer it. There can be no serious difference of opinion among intelligent men about the two alternatives. In the resolute clash of all possible views, there is infinitely more prospect of establishing a perspective fairly representing reality, than in taking refuge in one or two protected conning towers, each with an aperture opening only in one direction.

But the comment is made: "The sort of thing described at Johns Hopkins University is more fit for undergraduates than for graduates. Such a program is necessarily superficial. What it gains in extension it loses in intention. Specialization cannot amount to anything if carried on in that way."

I freely admit that there is force in the objection, though I cannot believe it is conclusive. I freely admit, too, that there are other objections to the Johns Hopkins plan, one of which is that it was unable fully to retain its distinctive spirit; and I therefore hasten to explain that I am not advocating a plan but that I am merely using this particular plan, of which I have such grateful memories, to illustrate a principle. And the principle is this: *Specialized science, whether physical or social, inevitably passes into a stage of uncorrelated scientific piece-work. In this stage of dismemberment, science is as inconclusive through its lack of coherence as it was in an earlier period from its superficiality. That is, it then had breadth without depth, it now has depth without breadth.*

Let me vary the statement in this way: What would you think of the state of engineering science that would go about the problem of a waterway between the two oceans in this fashion: By some sort of gravitation which we may take for granted, a certain isthmus becomes, by common consent, the field of operations. Then groups of people who own steam shovels go down and look over the ground, and decide where they can work their specialty with the most profit. At the same time, a group of people who control blasting processes make their examination, and pick out the spots where their particular technique can find the most to do. Meanwhile, men who own pumping machines select spots where they can find employment, and other men whose business is to construct masonry pick out places for building locks and dams, etc. All these people together flatter themselves that the sum total of this unorganized labor will turn out to be a Panama Canal!

This is exaggerated caricature, of course. Engineers know better than that, and social scientists are not quite as independent of one another as the comparison would imply; but seriously, our co-operation is indirect more than it is direct; it is accidental rather than systematic; it is after the event more than introductory to it. It is in the nature of picking up stray connections with work in other departments, instead of mapping out co-operative work to be carried on according to a concerted plan.

Will anybody tell me that I am talking about conditions which were, and which are not any longer? If that is so, name a single case in the wide, wide world, of a concerted inquiry into human experience in any large range, according to a plan matured by conference between representatives of the cardinal divisions of social science, and by the organization of their respective methods.

No! We are not yet scientific enough to do things in that way. There may be solitary instances of which I have never heard. If they existed they would simply prove the rule. Social science that would be relatively conclusive would be an account of the experience of men in their evolutionary process of finding themselves—the different factors and phases of this evolutionary process being exhibited in accordance with their actual functional values at different stages of the experience, not in accordance with schematic categories which bound the conventional worlds of the separate sciences.

For the sake of illustration, let us suppose that the cardinal factors in a given situation may be reduced to the *economic,* the *legal,* the *psychological,* and the *ethical,* each considered both analytically and synthetically. Have you ever heard of a single instance in which representatives of both phases of these four sample divisions of social science have actually planned and operated a large investigation into the concrete phenomena and the relative influence of these four factors in a specific case?

I have not; and because I have not, I make my assertion of today, which I hardly think anyone from any department of social science will deny: that we have no team-work worthy of the name of science between the different species of scholars that are exploring the social field.

We have nothing that compares respectably with the work of the naval or war colleges upon their types of problems. They assemble officers from each branch of the service to combine their efforts in finding out how all the resources of all the branches of the service can be brought to bear in delivering or repelling a given attack. What do we do in the social sciences? We retire into the segregation of our respective departments. From the viewpoint of our interest in one group of factors in the social process, we either cancel the other factors from consideration, or we assign them our own ratings, and then proceed to interpret the real experiences in terms of our specialty.

Are these vague generalities? Then I will make them particular. I will state them in terms of our own situation. Details vary in the different universities, but in the main matter I have no reason to think that we are better or worse than the others; because, as I hinted, I look upon the case of Johns Hopkins twenty years ago as only a temporary exception.

At least a dozen distinct methodological standpoints with reference to the interpretation of human experience are represented in our faculties, including the Divinity and Law schools. We are now in the eighteenth year of the life of the University. During that period, we have spent an aggregate of thousands of hours of the time of the faculty deciding whether one or two units more or less of Latin are necessary unto salvation; but there has been not a single hour of consultation between the men representing all these viewpoints in social science to see whether we can more effectively supplement and balance one another in our inquiries into human experience.

We no longer believe in such a thing as a cure-all either for public or private ills; but the salutary workings of publicity have made men rate it as nearer than anything else available to the rank of a specific for public wrongs. I may reduce my claims to the proposition that *our devices for publicity in the social sciences are far behind the demand.*

Probably it would be hard to find an investigator of repute in any social science who intentionally belittles any real factor in human experience. Everybody today intends to give full weight to every factor that enters into every problem which he investigates; but unfortunately no human mind is built on an omniscient scale. Our mental limitations make each of us, at best, an involuntary partisan after we have reached a certain outlook. It is impossible for us to see a given body of facts in the same perspective as another man who looks at them from an equally tenable standpoint at a different angle; and neither of us may be able to understand how the third man, observing from a still different angle of vision, can see the affair as he does. Since this is the case, the kind of problem which serious investigation of human conditions confronts today is too big for the abstract departmental type of procedure.

Yet our present academic process of accommodating the different *ex parte* representations is, for the men who represent these different standpoints to get each other's views more often indirectly than directly; then, in the presence of students who have not had opportunities fully to hear representatives of the other viewpoints, each of these partisans renders his opinion and returns an estimate of the proportional value of the other people's views and his own.

Suppose it were a case in court. Suppose your individual interests were concerned. Suppose you had a sharp difference of judgment about the equities of the case with the most upright man of your acquaintance. Would you think it the most effective and just sort of publicity for your opponent to appear in court both personally and by counsel, while your side of the case was presented to the court only in the version of your opponent and his counsel?

Not long ago a man took his Doctor's degree in history in a university that I might name. A student in another department was talking his course over with him and said: "Why, you have not had any ethnology!" "Oh, yes, I have," confidently answered the newly fledged Doctor. "I got that all right. Professor So-and-so gave us three lectures on ethnology at the beginning of his history course the first year." That young Doctor was about as well qualified to pass judgment upon the balance of forces throughout civilization as he would be to correlate science and religion, if he thought he could get all the science he needed to know by reading the first chapter of Genesis.

I presume that if all the economists in the world could be polled on the question which living economist has most enriched their science, a decisive plurality would name Schmoller. Thirty-six years ago Schmoller uttered the defiant economic heresy: *"The entire economic demand is nothing but a fragment of the concrete moral history of a given time and of a given people."*

Meanwhile nobody can accuse Schmoller of forgetting his own proposition. In a way, it is between the lines of everything he has since written. But how much more useful this axiom would have become to the world, how much more circumstantial our knowledge of its implications, how much greater influence it would have exerted upon academic science, and upon the private and public life of civilization, if competent students of comparative law, of comparative morals, of comparative politics, and of comparative economics could have co-operated in testing this theorem, and could have put their results in evidence over against the various materialistic interpretations of history.

Suppose the world wanted an answer to the question, on which President Jordan may or may not have committed himself recently, whether

France of today is a decadent nation. Suppose it became urgent to know whether France under the Republic is progressing or retrogressing, compared with France under Napoleon III. Have we any organization competent to institute an adequate investigation of such a subject? What is progress or retrogression in a nation? What is decadence or development? Who knows, and who has the means of deciding? Does decadence consist in a decreasing birth-rate, or may a decreasing birth-rate be a sign of progress? Is fecundity a criterion, or merely a consideration? Does progress consist in an increased *per capita* production of wealth, or in a favorable balance of trade; or may these conditions be merely the hectic flush of that greater white plague under which "wealth accumulates and men decay"? Is it progress or regress in a given case to alienate church and state? Can we measure progress or regress by constitutions and laws, or must we judge constitutions and laws by the types of people that they tend to cultivate, and by the sorts of character that they bring into positions of power? Has it dawned on us that national decadence or progress is a balance sheet which no accountant is yet competent to compute? Do we realize that we have no scientific criterion as to whether the business of living together in a nation is prosperous or non-prosperous? Not to analyze the problem below its large elements, merely to decide on the main factors of the composite standard by which progress or regress must be measured, would require some sort of tentative merging of partial standards, and ascertaining of the normal ratio between the elements of life which are the immediate scientific interest of biologists, of economists, of jurists, of psychologists, and of moralists. Has anyone heard of a serious attempt at scientific co-operation which might arrive at a tentative formula for the proportion in which these factors might enter into a criterion of decline or progress?

Or let us suppose a related problem on the constructive rather than on the evaluative side of social science. As one of my friends in London recently expressed it: "Some of our leading social theorists are trying to conjugate biology in the imperative mood." Under the spur of Sir Francis Galton, the men referred to are deciding that "eugenics" must become a national quest and a national policy. They see that it is absurd to apply science in raising corn and breeding sheep while we trust to luck in its most reckless form in producing men.

Suppose now that one of the civilized nations reached the conclusion that the problem of securing good heredity for future citizens is worthy of scientific attention. Waiving all questions about possible ways and means of artificial human selection, we have not even the beginnings of responsible scientific co-operation to determine the type of human being to be selected, supposing we had the means. How shall we decide upon the normal citizen standard? What shall be the formula of the ingredients to be mixed in the well-bred man of the future? What will his anthropometric picture look like? What crossings of races will he represent? To what extent will he be the product of a legal incubating system and to what extent a spontaneous growth? How will he be geared into the vocational life of society? What will be his response to the legal and moral tradition that cements his society? How shall we find out? Can the anthropologist tell us, or the ethnologist, or the culture-historian, or the economist, or the psychologist, or the moralist, or the apostles of either of the "cultures" in the special sense? Each of these can contribute some facts and inferences that must enter into the specifications. Each can furnish some more or less amateurish calculations of genetic cause and effect in the particular sequence of development to which he has given attention; but for purposes of scientific precision we have not even the preliminaries for the kind of co-operation that can present a decently authorized introductory description of the human type to be taken as best adapted to the conditions ahead in the course of moral evolution.

Perhaps it will appear that the last two illustrations are so remote from the practical that they are not convincing. Very well; I will state the case, without trying to elaborate it, in terms of a problem which is sufficiently near at hand. From the day of prohibitory tariffs in the Greek states to Joseph Chamberlain and Senator Aldrich, there have been countless variations of theory and practice in the matter of commerce with foreigners. Nobody is satisfied with our present American tariff, not even those who get the most out of it, because they want to get more. Our utmost hopes of a better tariff some time in the future are pinned to an embryo tariff commission.

Suppose we had a real commission. Who is competent to instruct the commission how its investigations should be planned?

The question really presented by a tariff policy is not a question of finance, not a question of politics, not a question of economics; it is a question of civilization in all its length and breadth and depth and height. A tariff is one of those devices which directly affects certain visible interests, which indirectly promotes or retards the whole human process. The total resources of a co-operative science of society would be able to furnish at best only guidance in experimentation upon the effects of different sorts of tariffs or no tariff upon the entire process of life. Meanwhile decent scientific procedure with reference to the tariff problem would call into requisition not merely a commission to assemble details but an advisory council, made up of scientific representatives of all the great life interests, both immediate and academic; and the task of this council would be to shape up each successive phase of the tariff problem, so that it would pay proportional respect to the physical, and economic, and legal, and moral, and intellectual, and cultural factors involved.

Any tariff policy whatever sets in motion influences which affect for better or for worse the whole big task of humanity. There is no co-operation of social scientists thus far which in any respectable fashion recognizes the complexities of the civilizing task which enlightened society must undertake.

If time allowed, I should be glad to show the same thing with respect to the problem of taxation.

The degree of goodness or badness in a system of taxation is a large factor in the ability of every human being to make the most of his life. While broader consideration has been given in some countries than in others to problems of taxation, and while the technique of taxation has been worked out very elaborately from certain points of view, the confusion and the injustice of the systems of taxation actually in use, and especially in this country, are a challenge which the social sciences as a whole have never organized themselves to accept.

I repeat then that the abstractions which we call social sciences have carried on their piecework in such a way that each of them has to its credit splendid achievements, when we compare these results with the mental acquisitions of earlier men. I am comparing our scientific situation, however, not with the past, but with the demands of our present complex life. Measured by the requisitions upon present scholarship, the social sciences are today merely preparing predigested mental food for adolescents instead of developing all the resources of fully grown men for co-operative research.

Partly as a commentary on the criticism that I am dealing with bogies which were put out of business long ago, I conclude with a passage from the current number of Schmoller's *Jahrbuch* (I. Heft, 1910) which I suppose I may be permitted to regard as fairly up to date. In that journal, Dr. Otto Neurath of Vienna has a long critical review of Wundt's recent volume, *Die Logik der Geisteswissenschaften.* Bear in mind that the reviewer is not in collusion with me. I have not bribed him to testify in my favor. He wrote from a standpoint quite different from mine; but it is an interesting coincidence that an entirely unsolicited message of agreement should come to hand from a distant source while I was writing this lecture. This is the closing passage of the review:

> The future of scientific investigation, not merely in the realm of the social sciences, but of all the sciences, will lead in an ascending degree to the increasing recognition of the coherence of all scientific thought. The separation into distinct disciplines will no longer have, as its last result, the isolation of the investigators, but a more general, more comprehensive investigation will arrive at the principles which are to be held in common, and thus will arouse the consciousness that science is a unity. The individual will then be able easily to take a general bird's-eye view of the total system of the sciences, while today he confronts a chaos. What is common to all the sciences will lend itself to distinct formulation, and as a consequence, an organization of scientific labor will be possible.
>
> We have today come to the pass that there is an

overgrowth of specialties in many a scientific territory, while no one surveys the whole territory. We call that division of labor. We should call it splitteration of labor, for we properly speak of division of labor only when a whole is accomplished through the co-operation of many. How few today see the whole of one science or even of one department! And there are many who find in this the glory of scientific labor. All special investigation gets its sense and its justification in being the investigation of a part which is to be put presently into its place in a knowledge of a whole. In order to bring about these combinations, some such co-operation must take place as Kant proposed, but probably not in quite the same form which he had in mind. It would be above all desirable if co-operative research by a large number of scholars could be carried on under unified leadership. A collection of special researches does not constitute a whole. That result can be attained only by the concerted labor of many scholars concentrating their methods upon a common problem. A series of special works, like Helmolt's *Weltgeschichte, oder die Kultur der Gegenwart,* is supposed to afford the layman a composite picture.[1] How is that possible, when the projectors at the same time assert that neither of the collaborators is able to produce a picture of the totality? In this case again, the result is that no one surveys the whole, and we merely observe how differently the various authors often treat the same thing, that there is often no continuation by a later writer where an earlier one had made a beginning—in short that the binding threads are lacking. Along with the special treatises there should appear in greater number than has lately been the case surveys by great investigators. Today we are hindering rather than promoting such work. How much would be gained if commentaries were now written upon comprehensive works, as was the general custom in the sixteenth, seventeenth, and eighteenth centuries. We have, for example, such commentaries on Adam Smith. If this custom were systematically developed, it would be at least possible that a special investigator might reinforce and fill out the work of the general surveyor, and in such work as that there would be genuine division of labor. Much is also to be anticipated from the fact that individual investigators, crossing the limits of their particular territory, seek the means of combination in which others will join them. Still further, the common work is promoted by such men as Jevons, Pierson, and Enriques, who examine the general foundations of science. This whole movement will rescue us from the scatteration of labor, and will lead to a genuine correlation of labor. Only through genuine combination of scientific effort can we arrive at a real participation in the great achievements of the human mind, and a just conception of the world as a whole.

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[1] Neurath might have added that Lord Acton's *Cambridge History* is in some respects a still better illustration of the point he is about to make.

LECTURE III

THE SOCIOLOGICAL REASSERTION OF THE UNITY OF SOCIAL SCIENCE

In the first lecture I tried to make the fact clear that a network of causes and effects weaves the life of men through the ages and around the world into a connected whole. That is, human experience throughout its length and breadth is a unity. I pointed out that our conceptions of science forbid us to assume that we have arrived at knowledge which deserves to rank as a science of human experience until our knowledge is itself a unity, that is, balanced and interconnected reflection of the system of reciprocal influences of which we find real life to be composed.

In the second lecture I argued that the very progress which has been made in the social sciences is one of the reasons why our present stage of scientific development exhibits a disunity of the social sciences.

I repeat that I am not denying progress when I uncover this fact of scientific segregation now that scientific co-operation is imperative. If it were worth while to discuss that point further, I should urge that this very disunity of the social sciences at the present moment is itself one of the proofs that science has been advancing. Some of the things that have to be done, in order to make thought about human life scientific, could not have been done without going through a period of isolated special research. I mean of course that, all things considered, there were no available means of reaching our present grade of scientific progress except by this freedom of exploration, which gave everyone an open field to follow his own bent.

Speaking in general of European thought from the revival of learning to the first quarter of the nineteenth century, we may represent it as occupying at most three or four separate areas, according to our system of classification, thus:

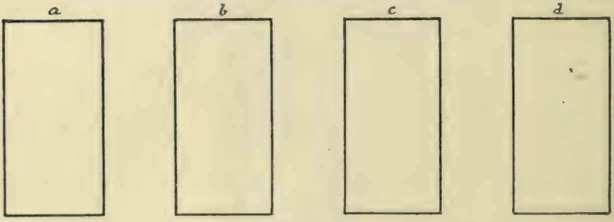

FIG. A

Now, roughly speaking, during the half-century between 1775 and 1825 the intellectual activities which had previously been kept within these boundaries had straggled into a large number of independent courses, and from that time until now the whole plateau of human knowledge has been divded into strips set off from one another by thin streamlets of science somewhat in this fashion:

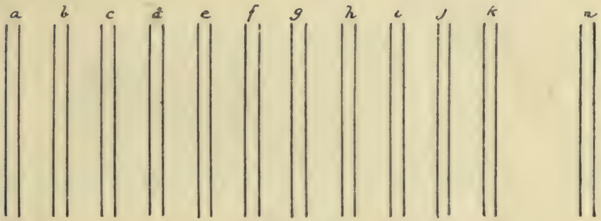

Fig. B

Each of these narrow lanes, which have taken the place of the broader tracts above, represents a deeper current in place of the wider and shallower mass in which it took its rise. While human knowledge gathered in three or four broad basins to the end of the eighteenth century, at the beginning of the nineteenth century it began to move in an increasing number of parallel grooves which tended to develop more rapidly downward than outward. We might liken what goes on under this method to a system of parallel fluids, not directly communicating with one another, but influencing one another in some degree by involuntary processes of infiltration or osmosis or capillary attraction. Now I will not apologize for mixed figures, because there is nothing closely analogous with the exact history of social science, and I am using this clumsy jumble of comparisons to represent different phases of it. I think we are all prepared to see, however, that neither the stage A nor the stage B in social science represents anything that any of us can regard as very satisfying to anybody's conception of scientific efficiency. And neither of these stages impresses any of us as likely to be very permanent, after our attention has once been called to it. As a general proposition, every social scientist admits that there should be the completest possible intercommunication between the divisions of social science, whether these are few or many. I cannot believe that a scientist of any repute can be found in the world today who would maintain that the means of intercommunication between the divisions of social science are as efficient as scientific completeness demands. To express the situation in a purely mechanical figure, which is familiar to everybody today, but would have meant nothing to anybody fifty years ago: Before social science can pass from a relatively rudimentary stage to the next more evolved stage, its procedures must develop systems of communication that may be symbolized by the lines of connection on a telephone switchboard, thus:

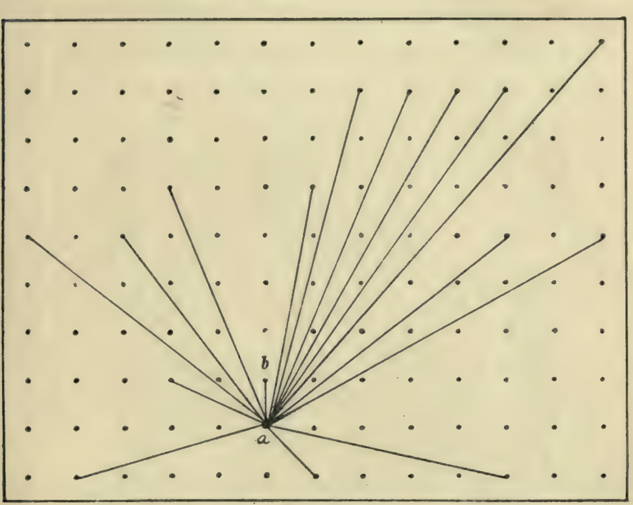

FIG. C

Accordingly there will be a direct and prompt exchange of influence not only between *a* and *b,* but between each of the separate major and minor centers of investigation and all the rest. Here the telephone figure fails, and the nearest comparison that occurs to me as a symbol of the result or output of all this telephonic communication would be an ideal news-service, in which the knowledge derived by the use of all this intercommunicating machinery would be organized and published, not according to the standard of its capacity to arouse attention, but in the ratio of its actual importance for the different interests that make up the normal processes of life.

If these rude figures have at all answered their purpose, they enable me to put before you in a graphic way the rough general facts about the rôle that we sociologists have assumed in the development of social science. In a word, while social scientists were nearly all so busy digging deeper the channels in their several lines of research that they could spare very little thought for what their neighbors were doing, or for the general situation which all this paralleling of unconnected investigation produced, here and there a few stray voices began to be heard saying that the situation B ought to be more like C.

Now, this is not all that sociology has come to amount to since, but it will pay to drive this third peg down. Let us assume then for a while that sociology means no more than would be involved in the proposition: *The situation B ought to become the situation C.* That was and is the substance of the sociological assertion of the unity of social science. It is the proposition that social science is necessarily investigation of influences which human beings exert upon one another. It rests upon the elementary knowledge that human experience is the resultant of forces which we may reduce to two main groups: First, the reactions between men and physical nature; second, the reactions of men upon one another. In the whole realm of knowledge, there is a larger unity under which these two phases of knowledge have to be comprehended and proportioned. Speaking now only of the unity within that shorter diameter occupied by human experience in the narrower sense, the sociologists declare that *the experience bounded by the reactions between men and physical nature on the one hand, and the reactions of men with one another on the other, is an interconnected experience, and that we shall have a science of it only in the proportion of our insight into the way and degree in which each item of this experience is affected by every other item of it.*

Before we go farther, I will put this large generalization into a concrete form. The possible illustrations are limited only by the number of situations past or present in which two or more persons have actually had any sort of dealings with one another; and the difficulty is merely in selecting a single illustration which as many people as possible have done some sort of thinking about, and which as many as possible recognize as a problem both scientific and practical.

Let us take the fact that the liquor traffic exists, and that indescribable evils are known to cluster around it. How shall we account for this phenomenon? How shall we place it in the network of human experience? Certain types of men easily dispose of it as one of the works of the devil, that has no part or lot with anything righteous, and that deserves no consideration beyond violent extinction. But, strangely enough, men living side by side, who are equally good parents, equally good business men, equally faithful to their political duties, who are equally conscientious supporters of the church, respectively assert and deny that liquor and the liquor trade are unmitigated evils. If it comes to a vote whether there shall be saloons in a town or not, it would be a very unprecise assertion that all the good men vote one way and the bad men another. The fact is that the line of cleavage between good men and bad cannot be so easily drawn as that, because the actual meaning of the liquor traffic cannot be settled by that summary sort of distinction. In an American city from twenty to forty nationalities may be represented among the voters. The attitude of the men of these different racial stocks toward the liquor business is a resultant of as many different national experiences, summed up, first, in actual physical organization, then in social custom, religious ban or sanction, legal status, moral standard, and economic policy—each and all modified by the personal equation of the individuals concerned. To the one man his alcohol, whatever the preferred form, seems as much a matter of course as to another man his potato or to another his pie. To some of these men alcohol in any form seems to carry the curse of God. To others the right to use alcohol as they please seems more self-evident and fundamental than the right of free thought or free speech.

Now I am not making or implying an argument in support of the liquor business, nor do I mean that all citizens are bound to master the history of the customs, laws, religions, ethics, and economics of each race represented in the voting list before they decide whether their vote shall be "wet" or "dry" in a local election, any more than I would demand that a man must have a Doctor's degree in chemistry before he is allowed to turn in a fire alarm. I do mean that if we are to arrive at a scientific interpretation of the liquor business, if we are to propose a scientific justification for a practical policy and program with reference to it, on the ground of the ascertained facts of human experience, if we are to reckon with the fact of experience that community action is never long dictated by a sectional will, but that it has to be, in the long run, an accommodation of all the wills in the community, then a knowledge of all the evils of alcoholism visited unto the third or fourth generation will not furnish the whole of that interpretation, nor of that justification. The decisive element, both on the abstract and on the constructive side of our social science, in the item of the liquor business, will be the actual mental and moral reactions toward the business on the part of all the elements of the population that hold the fate of the business in their hands. Social science in that connection would be exhaustive knowledge of the several national and other heredities and traditions that have predetermined the different types of group attitudes toward the liquor business, which approximately account for the attitude and conduct of individuals within the groups. Social science, in this particular, would be, on the one hand, such comprehensive knowledge of the different elements which enter into the demand for liquor in a given case, and, on the other hand, such comprehensive knowledge of the different effects of the use of liquor in a given community, that the course of action indicated by these complementary kinds of knowledge might be mapped out and proposed to the controlling elements in the community with as much authority as attaches to the plans of competent sanitary engineers for an adequate system of drainage. In other words, my proposition is that every situation in our physical or spiritual life is, in an analogous way, a junction point for all the lines of cause and effect that have been set in motion by previous human activity; and that there can be no credible science of any portion of our human situation which is not in part a calculus of the ratio in which every phase of previous and contemporary activity enters as a factor into the given situation as a resultant.

Now, I repeat, something of this has been understood time out of mind by everyone who has reflected upon the human lot. In a way and in a degree Homer tried to show it when he pictured the lines of cause and effect which he could make out, and then covered up his inability to trace actual relations farther by resorting to the stage machinery of mythical actors throwing their weight into the scale and queering the course of things that would otherwise have followed. From Plato to Hegel there were innumerable advances and retreats toward and away from consistent use of this more or less fleeting perception that every human action and every social condition or situation is, in some sense and degree, a function not only of the physical surroundings but also of every previous and contemporary human action, condition, and situation.

But while that perception was in the world, and while scarcely any scholar would have denied it in the abstract, it had about the same kind and measure of influence upon the actual progress of the social sciences which the belief of christendom in eternal punishment has had upon all classes and conditions of men six days out of seven in the countries where the belief has been professed. In other words, while men in either of the lines in B above may have acknowledged, under pressure, or in response to some extraordinary stimulus to their imagination, that the course of things in their respective lines had something to do with the sequences followed in the other lines, the actual relations of the social sciences to one another was more like B than C.

It was this state of things which drew from Comte in 1830 the memorable remark that the trouble with the world is the anarchy of its fundamental ideas. What he had in mind was precisely the situation represented by B.

As an illustration of the situation, I may cite the preposterous proposition of von Mohl in 1859, when he spoke with as much authority as anyone in Germany for academic political science, and when he laid down the principle in his *Encyclopädie der Staatswissenschaften* that the political sciences had nothing to do with political economy. As another illustration I may come down as late as 1884, and quote the opening paragraph of General Walker's textbook in political economy. These are the author's words:

> Political economy has to do with no other subject whatever than wealth. The economist may also be a social philosopher, a moralist, or a statesman . . . . but not on that account should the several subjects be confounded. The more strictly the several branches of inquiry are kept apart, the better it will be for each and all.

The frankest case that ever came under my personal observation was in 1905. In that year the editor of the *American Historical Review,* the organ of the American Historical Association, returned to the publishers a certain rather elaborate book on sociology. In a letter the editor stated that the book would no doubt be of interest to sociologists, but that he could not notice it in his journal because it contained nothing that concerned the historian. Whether that particular book was particularly good or particularly bad of its kind is not the point. The crucial thing about it for the present purpose was that two-thirds of its contents really consisted of an argument about the sort of excavating and tunneling and cross-cutting which it is most profitable to do in getting out historical material. The author may not have established his case, but it certainly is of concern to every scientific historian to know whether there are open questions in historical methodology. Until the sort of thesis which the book in question contains has been tested and disposed of in a scientific way, the historian who declares that his colleagues have no concern with it libels his profession. Besides that, he affords a sadly belated example of the stage of scientific exclusiveness represented by the diagram B.

Accordingly, beginning with 1830, there appeared more and more men who made it their business to emphasize this common knowledge of interrelations. They took as their division of labor publicity work for the perception that the kinds of human relationships which had been set apart from one another in abstract isolation by social scientists of the type B intimately and incessantly modified one another. These men began to ring the changes on the assertion that every social science is an abortion which does not adjust itself in principle and in practice to this all-pervading fact in the human lot. Some of these men presently became known as sociologists. They could not offer a specific substitute for the social sciences in the form of diagram B, but they preached in season and out of season that the state of things which the diagram B represents was merely a passing stage in the evolution of real science, not a condition with which anyone could remain satisfied.

I have hinted before that the charges which have been brought against the sociologists may be summed up in two counts: first, nobody would be fool enough to believe anything that they have to say; second, everybody always knew everything they have to say, and there is no use at this late day in making a fuss about it. Strangely enough, both of these verdicts were sometimes handed down by the same tribunal; yet the contradiction is not hard to explain. It is by no means wholly to the discredit of the critics.

In a word, the new apostles of unity in social science felt themselves bound to declare out of hand what sort of a unity real life actually is, which the abstract social sciences had partitioned off into a collection of non-communicating compartments. These proposed renderings of real life turned out to be analogies, and the originator of each and his imitators were understood to mean that the real world was literally what the analogies represented. Of course no perfect parallel for human experience is within our range of knowledge. Life is more complex than anything incidental to it; and any attempt to picture it by means of something more comprehensible verges on the folly of the traditional Greek fool who tried to give possible purchasers an idea of what his house was like by exhibiting a brick pried from the wall. Of these exhibits which did not exhibit, people very naturally said: We will have none of them. On the other hand, it was true that everybody engaged in social science at all held some sort of notion that all things somehow hang together in human experience. The ways in which things hang together have proved so elusive that most people credit themselves with having done their whole duty when they acknowledge the abstract proposition of unity. They want the concession treated, however, like their church confession, "We are miserable offenders." That is, no one should presume in everyday affairs upon this privileged communication. When anybody has proposed a concrete description or theory of the unity of life to which all might have subscribed as a harmless abstract idea, the luckless presumer was treated very much like the occasional people who declare that they have arrived at perfect holiness.

The variations of early attempts to interpret the unique unity of human experience may be reduced to three species: the *sentimental,* the *mathematical,* and the *biological.* The dividing line of chronology cannot be drawn between these types. All of them seem to be perennial. I will refer to them, however, in the order named.

The sentimental species of sociologists—the most picturesque of them never called themselves by that name, but they were a part of the sociological movement, and I will not try to cover up the relationship—range from Fourier, with his harmony of the human passions and his scheme of standardizing human society in blocks of sixteen hundred persons, and Robert Owen, with his co-operative factories, to men like Frederick W. Robertson, Charles Kingsley, and John Ruskin. Although these latter were essentially sane, it was true of them as of the less sane of the species that their emotional reactions were more in evidence than their analytic processes. From least to most respectable, the best that can be said of this type was that their zeal was out of proportion to their knowledge. It is no wonder that they could furnish little light and leading for the realignment of science. They did a great deal on the whole to spur the world's conscience. By this they indirectly prepared the way for a reconsideration of the social sciences. On the surface, however, while they lived, they seemed to function chiefly as promoters of the gaiety of nations. They were satirized as people who demanded that the laws should give legislative force to their dreams. Their ideas were described as schemes to lodge all the world in square blocks, each of whose four sides should always face the sunlight. The scorn which everybody felt, or affected to feel, for their futilities received its most dogmatic expression in Carlyle's elephantine phrase, "*philanthropistic phosphorescences!*"

The mathematical sociologists may be typified by August Comte. And I may incidentally use him besides as an illustration of a fact which is equally true of all the sociologists, namely, that whatever their intellectual faults, these faults were not strictly their own. They were rather indexes of the thinking of their time. The earlier sociologists did not invent their mental vagaries. Those whimsical methods of dealing with problems which require critical processes had been nurtured and sheltered in all the sciences, and when they were used in attempts to improve the sciences they were themselves vivid evidences of the need of improvement.

When Comte was getting his education there was probably no single book in the world which more intensely reflected the type of thinking cultivated by contemporary scholars than Laplace's *Mécanique céleste*. The first volume of this work was published in 1799. A popular interpretation of the same system had appeared in 1796 under the title *Exposition of the System of the World.* The Germans translated it the next year. A little later the larger work was translated into English, with valuable annotations, by our own Bowditch. Comte was a mathematician, and quite in harmony with the version which the ideas crystallized by Laplace had impressed upon the mental fashion of the first half of the nineteenth century. Comte thought of the universe and all it contained as a unity of two complementary systems of mechanism: namely, celestial physics and terrestrial physics. As everyone knows who has heard of Comte, the world presented itself to him so exclusively in the likeness of mechanism that in his subdivisions of the machinery he found no vocation for psychology. Human life in his rendering was a vast machine. The sociology that he offered to the world as a corrective of the dislocation of the social sciences was a technology of social machinery, a handbook of the soulless forces which turned the wheels of the ages.

Every once in a while, even today, some smarty comes to life with the discovery that there is nothing to sociology because Comte, who invented the word, tried to explain society simply as a solar system on a reduced scale. But that hypothesis was simply the best stagger which anyone could make at that mathematically obsessed time toward an intelligible expression of the connection of things. The important matter was that the human mind was at that time in travail with the mighty conception of the wholeness of human experience. We are bunglers if we miss that essential fact for wonder that the idea at its birth was not full grown. The main thing was utterance of the fundamental thought of wholeness. The particular picture of wholeness which was proposed, the wisdom or unwisdom of adopting a particular scientific name for the proposing of the picture, is a relatively insignificant detail. The fulness of time had come for concerted attention to the factor of the scientific situation which had been persistently neglected, which was the pass-key to the next stage of science, namely, *the universal reciprocity between the parts of human experience, which* *makes life some sort of a system of interconnections.* What the system was, and how the sciences should be labeled after they had adjusted themselves to this cardinal perception, were details which might come along in their turn.

It is no more necessary therefore for me to defend the mathematical or mechanical sociologies than the sentimental. They were merely incidents in the logical and psychological maturing of the human mind. They did not discover the ultimate terms of social wholeness, but they directed attention to the reality of social wholeness, and they thus provoked analysis that has approached nearer to a literal rendering of the reality.

I class as subspecies of the mechanical sociologies all the attempts to state human experience in terms of geography or of economics, that is, all the attempts to show that soil and climate made the Russians Greek Christians, and the Spanish Roman Christians; all the attempts to show that the laws of economic production foreordain the statute laws of the civilized world. Much serious history has been written on the lines of this mechanical sociology, either geographical or economic; and British classical economics, from Ricardo to the secession of the younger Mill, built its doctrines on the conception of the *economic harmonies,* which was merely a sanctimonious rendering of the more general mechanical version of life.

The primary fact in all this was that people were trying to make out the real connections between the confused aspects of human experience. The detail that the first attempts were not conclusive is precisely what should have been expected.

I pass to the biological sociologies. It must be remembered that just after the midde of the nineteenth century Charles Darwin was a more startling appearance in science than any comet has ever been in the physical heavens. Beyond the narrow circle of men who were beginning to exchange different ideas, and the lion's share of whose merits seems likely to go, in the bookkeeping of history, to Darwin's credit alone, the whole world still adhered to the conception that when the Creator of the universe one day decided that his animal collection was incomplete, and that it would be well to add cows, or dogs, or pigs, he issued an amendment to the constitution of the world, "Let there be cows, or dogs, or pigs," and forthwith there were cows, or dogs, or pigs.

Among my pamphlets is a syllabus on anatomy and physiology, published in 1849 for the college class of which my father was a member. There is a short introduction on what we should now call zoölogy. It briefly describes the current fourfold divisions of animals, viz., *Zoöphytes, Articulates, Molluscs,* and *Vertebrates*—but not a hint that these different forms of animal structure ever had any more relation to one another than chance specimens of coal and marble. Then the substance of the pamphlet is a description of the human body under the chief titles: first, the mechanical system; second, the nervous system; third, the repairing system; fourth, the reproductive system. On the whole, the syllabus is a clear and intelligible outline of the anatomical knowledge of the time, but the term by which that type of knowledge is now known, *gross anatomy,* fits it in more senses than one. It was merely a sort of carpenter's specifications of the human frame. There was not a hint of the elementary cellular structure nor of the processes of tissue-building.

The publication of the *Origin of Species* in 1859 seems for a time to have totally eclipsed the memory of Laplace. Of course mediocre men did not hear of biology for decades, but all alert and far-seeing minds forthwith began to look at everything either literally or figuratively in the biological light. The world of special creations immediately began to be construed as a world of universal development. The human experience that had been classified into groups of facts which had no dealings with one another began to tantalize the imagination with suggestions of all sorts of interconnections. When the biologists began to circulate those new terms morphology, histology, aetiology, ecology, etc., they proved wonderfully stimulating to all sorts of imagination, and not least so among the social scientists.

Again I need not assume the rôle of attorney for the zealots who caught up the biological clue and commandeered it into the service of social science. They were hasty; they were extravagant; they often seemed to mistake pictures for reality; but after all they were merely stretching the latest interpretations of science more than they would bear. Since some of the intimate processes of organic life had for the first time been brought to light, and since these investigators of social facts had discovered that all the experiences of men are knitted together in most intimate relations, what could be more natural than precisely the conclusion which they drew? They put these two things together: first, human relations are bound together in marvelous complexity; second, biological relations are bound together in marvelous complexity. "Aha!" they said. "What if these biological relations should turn out to be the pattern of human relations?"

Well, the suggestion has led to some very grotesque parodies of human society, but for my part I am not ashamed to say that I believe it served on the whole to promote real social science. Schäffle in Germany and Spencer in England—the former an economist who was ostracized by his peers for going off into such fantastic vagaries as biological versions of society, but justice is beginning to be done to his memory in appreciations by leading German economists today—these two innovators, Spencer and Schäffle, set the fashion, which held its own for a couple of decades, of attempting to describe the interrelations in human society as though human society were an expanded physical organism.

Again all sorts of fun were poked at sociology because it was supposed to consist in the theory that society is a big animal, and in giving names borrowed from biology to the parts and activities of this super-animal.

I was born into this biological sociology; I grew up in it; I have been accused of pernicious activity in helping to palm it off on the world; and I hereby utter my *ante-mortem* statement that I have nothing whatever to regret in my connection with the biological sociology. It was a thoroughly respectable attempt to express the literal reality of interrelation in human society in the most vivid terms available. I do not believe we should have been as near as we are now to critical insight into the facts, if we had not been schoolmastered up toward critical insight by these preliminary analogical representations. I have always had a lively contempt for people who could not or would not understand that this pictorial rendering of society in terms of organisms was merely a means of approaching within seeing distance of the actuality. Never for a moment have I meant anything by the device, nor have I understood anybody else whom I could take seriously to mean anything by it, which I would not in substance assert today. I have simply changed my estimate of the value of that particular device for bringing the social reality veraciously before our minds. I used to think it was a useful guide to research. I now think it is of no use whatever for strictly scientific purposes; but I believe it has a value in the earlier stages of sociological study simply as a pedagogical recourse.

So much for these three attempts at sociological articulation: the *sentimental,* the *mathematical,* and the *biological.* Each in its day was a serious effort to clothe a true perception in adequate expression. Each effort failed, because the perception itself had arrived after all only at the fact that some sort of social wholeness existed. It had not penetrated into the real character of that wholeness.

This was the situation when an American writer published a book which was the beginning of a movement that has led the Germans to nickname sociology "the American science." I mean Lester F. Ward's *Dynamic Sociology,* of which more in a moment.

My explanation of the reason why the Germans allowed the Americans to take the lead in formulating sociology is that German social science has always carried in solution so much of the assumption of the interconnection of all human experience—so much more than is in French or English thought—that the Germans did not feel the need of crystallizing this fluid sociology. The Germans thought, and as a rule still think, that an independent formulation of this factor of the interlocking of all human experience would be a redundancy in science. There is also more excuse for this position in Germany than elsewhere because, with all their separateness, the different social sciences have come nearer in Germany than anywhere else to cooperation as divisions of a single science.

Herbert Spencer was by far the most efficient press agent for the general conception of evolution. Nevertheless, as has been frequently pointed out, Spencer was not himself an evolutionist. I have no time to justify the paradox beyond saying that while Spencer was popularizing the notion of evolution he was also circulating a theory of society which was in effect as fatalistic as the hyper-Calvinistic dogma of foreordination. With all its exuberance of biological facts and imagery, therefore, the total effect of Spencer's interpretation of society was an invincible impression in the minds of those who accepted it, that although society has been evolved it is here to stay just as it is, for all that men can do to the contrary. All the evolution of society which Spencer allowed his readers to get a glimpse of had already been accomplished. At any rate nothing that men could do could alter or hasten anything. Society, in Spencer's version, was simply a gigantic organism endowed with an unalterable amount of energy, and this energy would inexorably redistribute itself according to laws lodged in itself. Men were simply points of the emergence of this energy. They were victims of illusions if they supposed they were generators of new energies not already striving for expression in the different repositories of nature's force.

Spencer would have disclaimed this rendering of his philosophy, but the disclaimer could not go beyond the words. This was the general impression made by his own language. To the satisfied Spencerian there was no more prospect of men's controlling the temper and policy of their society, than there was of their changing another organism into a man after it had started out, for example, to be a tree.

This Spencerian sociology was far and away the most influential variation of social theory in the English-speaking world when Ward published his first book in 1883.

Ward was by profession a botanist. He spent his best years as curator of the department of paleobotany in the Smithsonian Institution. He is such a thoroughgoing evolutionist that he was understood, by people who did not read him to the end, as a very crude type of materialist. In fact, his book really threw down the gauntlet to Spencer's fatalistic evolution by declaring that we have reached a stage of purposeful evolution.

I have often said, and I freely repeat, that I would rather have written Ward's *Dynamic Sociology* than any other book that has ever been produced in America. Probably a great many other books will be read after Ward's is forgotten, because—to utter a paradox of my own—its main idea is commonplace in popular thought, but it was new in science, namely, that "*psychic forces are as real and natural as physical forces, ...* and that they are the true causes of all social phenomena."

I must reserve details of this idea for later lectures.

This then up to date is the gist of the sociological reassertion of the wholeness of human experience. The unity of experience is a psychical unity. It has a common substratum in the physical conditions out of which it has evolved and by which it is limited. But these physical conditions are the fulcrum of the mental, the tools and the materials with which the mind begins its own further type of creation, not the final bounds of creation.

In brief, then, the sort of unity which we now assert in human experience relies upon no analogies, upon no indirect symbols. We say that human experience, beyond the conditioning physical side, is incessant exchange of mental stimuli. It is the carrying-on of that rudimentary process of physical evolution which is underneath the mental range of reality, into uncharted reaches of spiritual evolution, through the application of mental forces to conscious purposes.

And since we see the unity of experience in this literal form we have spontaneously come into a new alignment of the sciences of this unity. When I was in college, history and economics had no more dealings with mental philosophy, as it was then called, than the grocer and the hatter and the hardware dealer had with one another before the days of department stores. Today psychology is to all the rest of the social sciences as chemistry is to biology. It is the mind's detective, to pry beneath the gross anatomy of social institutions and movements into the ultimate mental processes of human experience.

Perhaps this sounds like a cryptic result after all. As my time is up, I shall have to leave it in this shape; but I shall try to show in the next lecture that this reassertion of the unity of experience, and therewith of social science, for the first time brings us face to face with the literal facts, and therefore with the actual problems of society.

LECTURE IV

THE CENTER OF ORIENTATION IN SOCIAL SCIENCE

The first lecture was devoted to the proposition that everything which occurs in human experience has some sort of relation to everything else which occurs, and that accordingly, we can have no science of human experience except in the degree in which we make out the whole system of interrelations given in the life of mankind.

The second lecture expanded the proposition that we have been going through a period of specialization in social science, which resulted in an excessive degree of isolation between artificially segregated divisions of science. This separateness had certain advantages, and it has accomplished certain very necessary results. Its obvious disadvantage was that it erected imaginary but effective barriers between divisions of social labor which should intimately communicate. The results presented by the sciences at this stage were like parts of a machine manufactured in different factories, according to the ideas of different designers, and consequently difficult to fit together when they come to be assembled.

The third lecture showed that the sociological factor in social science can be understood only when we give full faith and credit to its central contention, namely: *This deploying of skirmishers must be followed by a rallying in force upon some center of operations.*

Social science cannot be many. It must be one. The next stage of social science must be marked by a drawing together of the parallel or diverging lines of research into which it has been broken up. We must use the knowledge which we have already gained of parts or aspects or details of human experience to construct a more adequate general survey of the whole of human experience, in order that we may intelligently carry on the further work of finding out more about human relations—not merely the facts, but their meanings—and the work of planning the conduct of life acordingly.

I tried to explain that the claim of the sociologists to a hearing did not rest upon the particular conceptions or hypotheses which they have proposed as total views of human experience. I discussed briefly the sentimental, the mathematical, and the biological attempts at sociology. I pointed out that the sociologists were less producers than products of types of thinking prevalent in the world, more or less affecting all the sciences of their time; and that the sociologists were merely making the best selections they could from the means placed at their disposal by all the sciences that had gone before, to start the work of charting life. I tried to make it clear that sociology today can no more be held responsible for the first attempts of sociologists to outline human experience, than we are bound to join the party of the White Rose or the Red, to become Guelph or Ghibelline, if we assert that it is worth while to study history. Then I added that sociology has dropped all sorts of indirect approaches to visualization of the wholeness of experience. It no longer operates by means of analogies. It has arrived at the outlook that *human experience is the evolution of purposes in men, and of the action and reaction of men upon one another in pursuit of these changing purposes within conditions which are set by the reactions between men and physical nature.*

true

This means that we see in the experience of human society progressively complex interchanges of mental influences within the setting of material conditions which act as a tether that fixes the possible range of physical actions. Psychology in application to social situations accordingly becomes the timely tool of precision in discovering the elements of all the interrelations that make up social experience.

Here then is the task of today's social science: *To interpret, in all their relations, the visible careers of men as expressions of their various mental reactions.*

Let me put this in a more commonplace way. Every man born into the world faces the problem: *What sort of a place is this world anyway, and how can we make the most out of it?* Not one man in a million ever reduces his life problem to this general expression; but if you could have before you a chart of all the actions ever performed by every man that has ever lived, you would find this general question implied by every record which you could examine. You would not find in the whole exhibit an act that was not either some petulant revolt against a given lot in life, in a conscious or unconscious attempt to test the character of the world by resisting it; or some more or less bold prying into the possibilities of life by deliberate trial of different ways of doing things; or sleepy acquiescence in the fated lot, and submission to the impression that the best to be done is to grin and bear it as well as one may.

Whether we are active or merely passive occupants of our posts in life, we make or we at least accept a tacit interpretation of our place. We therewith adopt a more or less restricted program of life as a scheme of action which is within our range of possibility.

Now this appraisal of our lot, and this fitting of our program to it are involved in the life of the dullest and stupidest whether they are at all conscious of it or not. These processes are in the thoughts by day and the dreams by night of a rare few in every society. In some partial form they come up in the consciousness of all but the most sodden, at certain intervals. In either case men imply or they bluntly ask this question: *What sort of a world is this at bottom, and what is it worth while to try to do in it?*

This also turns out to be the great question of science. It is the problem of science in a nutshell. All the astronomies, and geologies, and physics, and chemistries, and biologies, and anthropologies, and histories, and so on through the philosophies, are merely different ways of working out an answer to the central human problem: Of what sort is the world and to what uses can we put it? Science has its place in this big mix that we call life, as the agent of all men in getting as near as possible to an answer to this central question. Science has other minor meanings, just as there are incidental meanings to food besides the sustaining of life. But the meaning that would call for science in the economy of human life, if all its other uses were taken away—just as the life-sustaining functions of food would be in demand if all its subordinate uses were cut off—the primary and chief function of science is to act as all the people's proxy in finding out all that can be known about what sort of a world this is, and what we can do in it to make life most worth living.

I take it for granted that no argument about this proposition is necessary, so far as the physical sciences are concerned. I therefore start with the blanket reservation that there is no possible phase of human experience which is detachable utterly from its physical conditions. With this reservation in mind, I am confining myself to the social phases of science.

By far the greater mass of men do not consciously get beyond the question: How can we make the earth furnish the means of feeding us? Those who do get beyond this question find that it is but a step to the problem: Supposing we have found out how to make the soil furnish food, how can we be sure that our fellow-men will let us eat it? The two questions became involved at the Cain and Abel stage of human experience and have been compounding their complications ever since.

Assuming that other people are constantly working out the answer to the first question, the big problem of social science is: *What is the character of that world which is made up of human beings, and which determines our chances of eating the food which the earth provides?*

If you have noticed the titles of my later lectures, you have seen that I had in mind not the mere knowledge phase of science, but the application of knowledge as a working rule. I shall come to that in its turn, but I am concerned here with the center from which all scientific operations must be carried on, the scientific Greenwich meridian, the point of orientation from which we may take reliable bearings throughout the most complicated researches in which we may find ourselves involved.

Now the cardinal fact for social science to keep in view, the point of attachment of all its different radiations, is so obvious, it is so commonplace, it is so matter-of-fact, that when I put it into words you may think I am either trying to deceive you, or that I have deceived myself. You do not want to be put off with platitudes. You want a profound scientific principle. I shall have to face your certain disappointment at what I have to say on this phase of the subject. It will affect you as an entirely empty form of words. It is empty, however, not because it is untrue, but because it is in the class of those ultimate truths to which we do not expect to conform until the millennium. It is like the moral axiom: "Everybody ought to do the right thing." Nobody denies such a proposition, because the evidence in support of the denial would be hard to get; but few people would admit that such a commonplace can do much to change things as they are. In reality, human experience is made up of indirect ways of demonstrating by experience that so-called practical affairs are crude barbarities until they apply such moral axioms as regulators of conduct.

Let me further prepare your minds for the pivotal platitude which I shall express in a moment, by recalling the notorious fact that all through the centuries during which human thought was vision-mongering before it began to be scientific, its essential vice was contempt for the commonplace, and trapesing off to something more impressive. Nobody knows, for instance, how many ages it was after people could count four, until they observed that two and two always count up four. We have records of several thousands of years of mythologizing about the movements of the heavenly bodies, before anyone was so vulgar as to drag orchard-windfalls into the case, and to suppose that there was anything in common between them and the orbits of the planets.

Now the social sciences need the same homily which the rustic father gave his son when the boy was starting out to make a fortune in the great world: "If you ever run up against anyone you're scairt of, John, remember they're only jest folks after all."

The social sciences are dealing with "jest folks." We have constructed in the name of science imposing systems of abstractions and generalizations about human experience. These conceptions would lose very much of their impressiveness, and on the whole would present a pathetic appeal for repair and renovation, if they were reconsidered by means of this test.

The center of orientation, then, for the social sciences, is the fact that the reality which they are attempting to report and interpret is simply: men paying attention to different objects, men finding other men the most difficult objects of attention, men forming valuations in view of their objects of attention, men adopting purposes in the line of their valuations, men selecting means of accomplishing the purposes, men applying the means in efforts to realize the purposes, men passing into changed personal equations in the course of these endeavors, men applying their modified personality to objects of attention which may themselves meanwhile have remained constant or in their turn may have been modified; and so on, with altered ratios of the terms, through recurring cycles, which so far as we know are endless, in which the element of central and final significance for our intelligence is the men, the cooperating men, the conflicting men, forever expressing themselves, forever becoming something they were not, forever stopping short of their promises, forever renewing their promises, but in spite of everything and because of everything forever giving all the value that we can discover to the whole experience.

Now, this is either bathos and bombast, or it is the most fundamental scientific truth abroad in the world today. If numbers settled the case, it is inflated nonsense. Of course these lectures are my assertion of belief that, in this instance, numbers are wrong. My opinion proves nothing except that it is my opinion; but I frankly profess the faith that what I have just said is as important for social science, and will some day prove as essential for social science as the Newtonian laws are for the physical sciences. It is not my discovery. One could wish nothing higher in science than really to have brought this truth to light; but it is in fact the composite message of all the science there is in the world thus far. My pride of craft makes me wish I could claim the merit of the discovery for the sociologists. I cannot even do that. All I can claim is that in common with many others the sociologists have been picking up this message from our intellectual atmosphere; but more than anybody else they are trying to make all the social sciences take knowledge of its meaning.

If there is a fighting chance that the sociologists are right, and if you men have not figured out what it would mean for your programs in social science in case we should turn out to be right, it ought to rouse every last ounce of scientific spirit there is in you to come up against the challenge which the thesis contains. There is more than a gambler's chance that my proposition has led you up to the boundary line between two epochs in science. It may be the conceit of a faddist, but if I had the floor in a congress of the foremost scholars of the world, I should use up my time arguing the proposition which I am presenting to you today. I should declare to them, as I do to you, that it is the surest landmark which the searchlights of all the sciences together have discovered. They would think, just as you do, that the proposition is too homely to be profound. But so long as men of your generation live you will be scientific stay-at-homes, not volunteers at the front, if you are not helping to test this theorem and to settle the issue which the sociologists have raised.

I am not sure that I can put this proposition concretely enough to fix the bearing of this point of orientation more distinctly in your minds, but I will try.

Suppose it were possible for us to extract all the social science that is latent in the experience of England from the Conquest to the present moment. When reduced to its lowest terms, what would that science consist of?

If I have told you the truth about the center of orientation in social science, the knowledge which the experience would yield would be, in a word, an exhibit of the processes through which the men of England and the men of Normandy who confronted each other at Hastings, and the masses for whom they were proxies, were succeeded by the very different men who are now Britons. It would consist more than anything else, first, in a distinct showing of the differences, the variations in the personal equations, between the earlier men and the later men; and second, in a tracing of the cycles of mental processes through which the one type of persons was succeeded by the other. It would follow the clue that the evolving process of attention, and valuation, and invention of means, and volition, and the reconstruction of the actors along with much reconstruction of the world which they acted upon, is the central reality in the whole experience; while the more obvious occurrences in the experience fall into the rank of machineries and incidents relatively incidental to the main process. It would start with a manifest of the world as it presented itself to those earlier men, particularly the horizon of their relations with one another, with the valuations which they formed with reference to this world of things and men, with the purposes which they shaped in connection with these appraisals, the acts which they performed under the promptings of the purposes, the effects which these experiments had upon the manner of men they were, then the renewal and the repetition of the cycle of personalization throughout the course of social experience from the earlier date to the later. Throughout the whole survey, the ways and the degrees in which the individuals reacted upon one another would constitute the larger part of the process. In all this the Englishman that was, that was becoming, that became, and thereupon gave promise of becoming, would be the essence of the reality. At every stage, the world consisting of Englishmen in their reactions with one another was remaking and being remade by the personal factors that composed it; and everything incidental to the process, which was not a phase of the personality involved, was incomparably subsidiary to the human evolution.

Again we have to reckon with variations of the two stock replies to the sociological argument: first, "All this is merely a blur of word coloring; it has no meaning"; second, "This is precisely what all the social sciences are doing, and always have been going, and all this flourish by the sociologists is like nothing so much as farmer X's rooster crowing after farmer Y's hen has laid an egg."

The ignorance of the former objection is so far beyond help that I leave it to stifle in its own smugness. There is something in the second objection; that is, it must be taken seriously, in order to bring out just what my thesis means, and to show that the objection lies against a thoroughly false assumption which my proposition might imply but does not.

The objector of the second type who sees no force in the sociological proposition is inclined to treat it as slanderous toward all the older social sciences: "What else have we been dealing with," he demands, "but man and his fortunes?"

There is nothing grudging in my reply that, apart from the little which each of us may have learned through his own individual experiences, most of what we know about the life of men has been mediated to us in one way or another by the social sciences. I am not an unwilling witness that all the ability we have to propose problems of human relations is a result of the tutelage of the social sciences. If that were the item in point, I could as gratefully as anybody eulogize our predecessors in all the social sciences, who have perfected tools of research and collected material in which our successors will discover much that we do not detect about the human processes. I am not defaming the social sciences, but I am trying to locate the bigger things still to be done.

What I mean may be illustrated by my own experience in connection with the "classics." It would contradict all my claims about the value of studying human experience if I denied that the Greek and Roman classics are worth studying. The way in which I was compelled to study Greek and Latin did not give me a fair chance to make the study worth while. The claim was, and I now believe the truth is, that the Greek and Latin literatures are worth study because they contain the thought and interpret the civilization of two marvelously significant groups of men. In my own case, I had studied Latin six years, and Greek five, before I began to be convinced that those men had any thoughts, and it was much later before I got anything resembling a definite perception that they had a civilization. There was certainly some screw loose between the theory and the application. The only thoroughly lodged impression in my mind was that those people, celebrated for their thought and their civilization, really had nothing but a grammar.

To the same effect is another detail of my own experience. From the time when I began to talk, I was taught something about the Bible every day until I entered college, and nearly every day until I received my baccalaureate degree. But I was twenty-two years old—I distinctly remember time and place—I was wandering aimlessly among the shelves of a theological library, when I came upon a book with the words upon the cover: Kuenen. *The Religion of Israel;* and for the first time the idea broke into my mind that Israel really had a religion!

Whether the fault was mine or the teachers' or both does not affect the point of the illustration in the least, namely: we may expend the whole force of our minds, and exhaust all the technique of our science upon material sufficient to interpret men, but in spite of all, it may turn out that we have indirectly and imperfectly studied men. It may prove that we have studied adumbrations of them or tangents to them. We may have mistaken some of the things they have done for some of the things they were. We may have become so much interested in men's grammars or their scriptures that we have overlooked the makers of grammar and scripture.

Let me still further guard myself against the suspicion that I am belittling what the social sciences have done. If I did not know how to admire the labors of scholars in all the social sciences, and if I did not know that the value of that which they have accomplished and are accomplishing is beyond all computation, I should certainly be unfit to discuss the task that remains. I am not engaged in depreciating the work of past scholars, nor of denying the importance of the work of present scholars. My concern is with the plans of scholars for the future. Are you going to be content with the social sciences in their present shape? Are you going to assume that they are as far-looking and as penetrating as they may be? Are you going to assist in turning the technical departmental lines between types of social science into caste divisions? Are you going to throw your influence on the side of developing a petty sectarianism in science, or are you for aiming at a convergence of all our scientific technique in multifocal vision upon the common object?

I believe your decision will turn solely on the question whether the issue can be put before you so that you can plainly see the two horns of the dilemma. I should have to be a pessimist if I doubted your choice when you are once within sight of the alternatives. For that reason I am urging that, with all respect for past achievements and for present efforts, the outstanding business of the social sciences is to accomplish such a readjustment of their various perspectives, with reference to the central point of orientation, that they will clarify instead of confusing one another.

But this is a digression. I was replying to the claim that the social sciences have always been studying men and nothing but men, and that it is ridiculous for sociologists at this late day to preen themselves over the pretense of newness in their dictum that we need to study men.

To this claim that there is no call for my assertion I answer that it would presently advance our social science by leaps and bounds if the scholars who now, once a year, split themselves up into little mutual admiration societies would meet together and conscientiously thresh out the question whether they really intend to supplement one another in connected research; whether they really are combining their efforts upon a common object; whether their common interest really is the past, present, and future development of men, or something else which they have some way of placing at the center of attention. The most dynamic doctrine that could be uttered in such a company would be the proposition that the social sciences are missing their calling by groping around among the penumbras of men instead of fixing their attention on men themselves.

I will make another attempt to say this more concretely.

What do we do when we study political science? Do we study men directly, as they are in reality? Let us see. Suppose we start under the guidance of the anonymous scholar who gives the *Century Dictionary* one of its definitions of political science. He says that it is "the science of government." Now this sounds very plain, very plausible, and very innocent. It is, as our science goes. I am not arguing that one social science is more at fault than another. I am calling attention to one of the apparently inevitable workings of our minds when we are operating the scientific processes of abstraction and analysis. The conclusion toward which I am arguing is not that these processes should be abandoned. We surely have nothing to take their place. My argument is that these processes must be reinforced by the process of synthesis, which shall organize all the partial results that abstraction and analysis reach. This synthesis must put together all the phases abstracted and the details analyzed and the relations generalized. It will not give us science, or knowledge of the whole object as it is, unless it reconstructs all these aspects of the object and its relations so that they appear in the same working connection which they have in reality.

Now, to go on with my illustration from political science. Do you not see that when you propose to yourselves the subject "government," you deflect your attention from the real center, namely, the men governing and the men governed, somewhat as you throw the family living in a house out of your direct field of vision when you get absorbed in the architecture of that house as a problem of domestic science? What happens when we devote ourselves as specialists to one of these abstractions, such as government? Well, that depends on a great many things; but in some degree and in some form this happens to every one of us. We credit a separate existence to the notions which go into the abstraction. We tend to think of that existence as though something identical with the picture in our minds had a being outside of our minds. We are inclined to think of government as an incorporeal institution permeating the spaces between us, or hovering like a cloud above us. When we stop to think of it, we know that what we have to deal with under this term "government" is men controlling themselves and controlling one another and controlled by one another, and pushing and pulling every which way to change the balance of control. We know too that the things of most human interest, and so most needed in the knowledge properly to be dignified as the science of government, would begin with answers to the question, Why do men want to control themselves and one another? The hotter we get on the trail of the answers to this question the more we turn our backs on the artificial abstraction "government," and the closer we find ourselves to the plain men who are doing all that is being done. We find that because men are men they do not live unto themselves alone, but they are what they are by mixing with other men. Then come trials of different kinds of strength between them. Whatever strength of body they have, and whatever ability to command physical means outside of their bodies, and whatever influences they can exert upon one another, from

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force to love, are put at the service of their various wants, as far as possible to secure the supply of those wants for the most self-assertive, with such provision as may then remain for the less assertive. But these adjustments between the more and the less self-assertive are not simple matters. These very self-assertions are again expressions of the men. In these self-assertions the men show their make-up. They do not assert the same force, in kind any more than in degree. One man's force would have to be expressed chiefly in terms of hunger, another's perhaps in terms of superstition, another's in terms of vanity, another's in terms of curiosity, and still another's in the spirit of team-play with his fellows. However the units concerned in the particular case may be composed, they pit themselves against one another in smaller or larger groups in a unique competition for existence and for prevalence. Without carrying the illustration into greater detail, it is evident that the deeper we get into the literal processes which we bring to light when we begin to investigate the full phenomena of social control, the more does the conception "government" become inadequate for purposes of precision; and the more are we forced back upon the homely fact of the make-up of men and their incessant strivings for mastery.

This was virtually the point of Professor Paul Reinsch's address to the Association of Historical Teachers a few weeks ago. And this leads me to repeat that the sociologists are no longer voices crying in the wilderness. In every one of the social sciences there are influential scholars who are saying the same thing which the sociologists say. They are heading the movement in their respective sciences for concentration around the normal human center.

I might illustrate further by going into the history of that particular concept of political science, "sovereignty." This abstraction has served many purposes, but every political scientist is aware today that it came to be an opaque body between men and the meaning of their own actions. It is true in the rough, for example, that American political theories from 1775 to 1875 treated the idea of "sovereignty" as though it were an independent force as external to human wills as the phenomena of gravitation. Just as long and as far as that impression affects our minds, our attention is drawn aside from men as our center to some unreality constructed in the place of men. What then is the truth about "sovereignty"? Why, the word is merely an abstract substitute for the men by whom, in a given case, other men consent to be ruled, and for the terms under which the rule is accepted. "Sovereignty" is merely a general symbol for certain of the more or less temporary adjustments which men make with one another.

The same thing is more easily seen in the case of political economy. I will not assume the responsibility of deciding the question of fact, as to how far any individual economist has gone in the way of disregarding men and cutting his lines of communication with that orienting base by turning his attention to wealth. I know for instance that German political economy never fully consented to that aberration. I know that since 1872 the German economic theorists have successfully maintained that political economy must be a knowledge of men for the service of men. I know that the angle of vision in English economics has greatly changed since Marshall in 1892 defined economics as "the study of men's actions in the ordinary business of life," and then added: "Thus, it is on one side a study of wealth, and on the other and more important side, a part of the study of man."

This is all to the good, and it again illustrates the statement that the sociologists are not uttering *outré* ideas. They are simply urging that the full implications of ideas which have found voice in all the social sciences shall be respected. I know that English and American economists have advanced even upon Marshall's formulation of their problem. I am not undertaking, therefore, in this summary review, to decide how much any individual's vision might actually have been deflected from the perspective which has men as its vanishing-point. I simply point out that in so far as you are drawing wealth into the center of your field of vision you are by just so much turning your gaze away from men as your center of vision. More than this, when you adjust your vision to the abstraction "men's actions in connection with wealth," no matter how you define the abstraction, you are looking at the reflection of men in a convex mirror. You do not study them in the most objective moving picture which organizes all men's actions.

For instance, inspect the workings of that partly legal, partly economic concept, "property." It has been used over and over again, both in pure theory and in the discussion of practical politics, as though it were one of the unalterable factors in the nature of things. By taking the concept "property" as an eternal datum in science we have allowed ourselves to be blocked off from the sort of inspection of men themselves which discloses what "property" means. It turns out that the activities which really exist where we have set up the entity "property" constitute another type of process which men are carrying on with incessant variation. "Property" is really a collective name applied for convenience to the infinite variety of ways in which we agree to render aid to one another in holding on to things that we have acquired or in acquiring more things. Property is not an attribute of nature, it is a mode of men's actions.

I may say the same thing in terms of history. When E. A. Freeman coined the aphorism, "History is past politics, politics is present history," he seemed to be saying something very much to the point. In a way he was, but a little reflection shows that the assertion is inaccurate in one way, because history is much more than past politics, and politics is much less than present history; and it is inaccurate in another way, because it sets up some sort of a conventionalized picture under the term "politics" in place of the reality of *men in all their involved ways of acting.*

I will not raise the question whether we are likely forever to speak of history at all as one science, or whether we shall refer to the historical aspects of all experience, and shall make requisitions upon historiography in all social investigation. The fact is that, however we define or describe it, historical vision is always concerned with real men acting; and the vision is blurred whenever we permit summarized abstractions to obtrude themselves between us and the men.

If I could do so without going too far into technicalities, I should illustrate again in the case of the psychologists and their abstraction "consciousness." I should urge that it is quite possible to change the focus so much that men acting will pass out of the range of vision, and there will be left a supposititious something which consists of mental operations viewed in a vacuum bounded by a fictitious subjectivity and insulated from the objective processes of men's life.

As a last illustration, sociology has furnished and is still furnishing a notorious instance of the same mistake. In groping after our center of orientation we have had recourse to the abstraction "society." Thereupon the sociologists have proceeded to give pitiful exhibitions of themselves committing the very blunders which they had observed in others and which they are trying to persuade others to avoid. We have naïvely furnished our quota of evidence that, indispensable as it is in science, the process of abstraction is dangerous. Instead of keeping real men successfully in sight, we have summarized them in this artificial conception "society," and then we have gone on elaborating the abstraction in countless unreal ways. I referred to samples of them in the last lecture.

What is the reality which we get a slanting view of in the concept "society"? Why, it is men associating. The thing to find out is, why men associate, and how they associate, and by what means they associate, and why and how and by what means they vary their associations. This conception of the problem brings us again to the perception that men's associatings are not phenomena which have a transcendental existence. They are only certain external phases of men's actions in their whole personality. They are the outward form of men's essential reality, in their total experience of arriving at valuations, and clutching at straws to save what seems to them worth saving, or inventing institutions to accomplish what seems to them worth achieving.

People who are captious, who are zealous for some view which all this impeaches, who are not dead in earnest about making science the purest possible vicarious sacrifice for progressive enlightenment of all men, may easily persuade themselves that what I have been saying is nothing but finicky fussing with words. Men who have been trying as long as I have to save the world by the foolishness of sociological preaching have learned to chuckle over that brand of evasion and to bide their time. My own estimate is that we have been getting a hearing more rapidly than it was reasonable to expect. The men who really believe they can afford to treat the sociological argument contemptuously are growing less influential every day. At the same time men of prominence in every branch of science are conceding that we have established our standing in court, although they may not admit that we have a strong case.

I may sum up the sociological argument, so far as I have presented it, in a very simple way:

The common object of social science is *men acting*. At present the older social sciences more than the sociologists are seduced by the witchery of words. They think they are still dealing with men acting, when they are becoming fascinated by abstractions from men symbolized in pretentious general terms. The consequence is that they really substitute a make-believe world, an apocryphal world, for the human world.

The corrective of falsifying abstraction is orientation upon the real object. The central questions for social science are: What have men done and how and why, and what light does this experience throw upon what remains to be done, and how to do it?

To answer these questions the apparatus of all the social sciences will be required. Our answers will be reliable in the degree in which we learn to use all the apparatus by co-operative methods in the common labor of the social sciences. The central task of social science is to understand past and present men, and to derive from this knowledge valuations of both ends and means for the use of the men we shall be tomorrow.[1]

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[1] When I followed familiar usage and spoke of the twenty-four "factors" in the experience of the Germans (*vide* p. 16), that form of expression illustrated the very tendency against which this lecture has warned, viz., to substitute impersonal concepts for men when we attempt to report human relations. The inexact expression "factors" is of course a crude way of referring to men who had assembled results of their experience in conceptions and valuations scheduled 1–24. The alleged "factors" were literally men affirming these conceptions in their activities.

LECTURE V

THE SOCIAL SCIENCES AS TERMS IN ONE FORMULA

I have now called your attention to four phases of the situation with which social science has to reckon: first, the phase which I have referred to in variations of the concept "the wholeness of human experience"—the fact that everything which now is in human experience has some kind and degree of relation with everything else that has been and is and is to be. This fact implies that science which purports to be knowledge of human experience confronts the task of composing itself so that it will truly reflect this wholeness of the reality. Secondly, I have described the phase of attempted independence and self-sufficiency of sciences, which became acute as an incident of scientific specialization in the nineteenth century. Thirdly, I have told of the attempts of the sociologists to convince the other social scientists that the time is ripe for more effective scientific co-operation and centralization in accordance with the indications of the whole experience to be investigated. Fourthly, I have argued that the reality which all science has to interpret is *men acting upon one another* *within physical conditions.* Hence the program of conforming science to reality must constantly correct itself by reference to the activities of real men as the center of orientation.

As a caption for the present lecture, I have used the mathematical or the chemical manner: "The Social Sciences as Terms in One Formula." Before I discuss the formula itself, I will try to give a general idea of what I have in mind in using that mode of expression.

All that I have said so far in these lectures has implied, and I have intended it to imply, that complete social science, if it were possible, would find a place for everything in human experience and would set everything in order in its place. I presume that every social scientist of whatever specialty, and whatever his particular view of actual or desirable relations between divisions of labor in social science, thinks of such an outcome as the ideal aim of science, quite aside from opinions about human ability to approach very near to that goal. I suspect that each of us has a mental reservation to the effect that his own science, as it now stands and as he is helping to make it, will fit bodily into the whole scheme of knowledge. If we did not assume this we should be less at ease in our various academic Zions, and less able to ignore the whole methodological question.

But in spite of this comfortable assurance the habit is growing, both on the lay public that looks to scholars for the solution of scientific problems and on the scholars themselves, of putting questions in a way that plays hob with the beautifully precise old statical division lines between sciences. Neither layman nor scholar any longer asks as exclusively as he used to, "What aspects of things does this or that science consider?" Both laymen and scholars are asking more often and more seriously: "What has been going on in the world, and what is going on, and what does it all mean for men today?"

We have recently had an instructive illustration of this modern attitude among the physical scientists in our own university. Several years ago one of our geologists found himself asking the question, What occurred as causes of a situation presented by the rock formations in a certain locality? In running down the clues to what occurred that geologist found himself facing the dilemma of disregarding all the conventions of categorical science or calling off his search. He was already as far off his scientific preserve as he could conveniently get. Starting with the crust of the earth and the processes of its formation, he noted that he was probably dealing with the same processes which had transformed the original star-dust into our visible sidereal system; the same processes which are now constructing the most distant nebulae into worlds. He saw that he could find out exactly what these processes were only with the help of difficult mathematical calculations. He saw further that the forces at work were also chemical, and that the share of these chemical processes in the actual procedure was an important factor in the complete explanation. The upshot was that the ancient ritual of scientific propriety received a ruthless shock. Regardless of the definitions of their respective fields, geologist, astronomer, mathematician, and chemist presently had their coats off and were working together to solve a real problem. The complete success of their inquiry would register itself in some sort of statement distantly resembling a formula in mathematics or chemistry. That is, *such and such quantities of this force, and such and such of that, and such and such of the other, applied under such and such conditions, gave the formation in question.* The result would be neither pure mathematics, nor pure chemistry, nor pure astronomy, nor pure geology, in any archaic, separatistic, schematic sense. It would be a realistic formula of the quantities and modes of the participation of the different factors in the actual occurrence.

I cannot imagine a more vivid object-lesson in the spirit of modern science. The same spirit, not yet as sure of itself, is steadily making its way on the social side, and it is this spirit for which the sociologists have volunteered to speak. The general position amounts to this: Experience is a reality to be expressed by a formula, the terms of which would have to get their valuations through the co-operation of all the processes at our command for discovering knowledge. The combination of the terms so evaluated, assuming that the work could be made precise, would give a true equation in the form:

$$\textit{The given experience} = (?\,u^{?})\ (?\,v^{?})\ (?\,w^{?})\ (?\,x^{?})\ (?\,y^{?})\ (?\,z^{?})\ \ldots\ (?\,n^{?})$$

The task of social science as a whole is to ascertain how to discover the values of the unknown quantities, together with the values of their coefficients and exponents, throughout the whole range of observable human experience and particularly in present situations.

The sociologist had found that scholars held completely contradictory opinions about the fundamental question whether anything remotely resembling such a formula or capable of serving as an approximation to it is attainable.

On the one hand men say: "We cannot get a unified explanation of human experience. No such explanation is possible. All that we can reach is connected views of certain aspects of experience. We can have sciences of these several abstracted relations, but we cannot have a science of the interactions of these relations."

On the other hand other men say: "Science is a relative term at best. It does not mean omniscience even about a single subject. If it did we should have to stop talking about science altogether. There is no provision for such a thing in this world. Science is knowledge systematized to the best of human power and connected up part with part to the extent of human ability. In its very essence knowledge is a recognition of relations. Draw a dead-line through relations that actually exist, and say to different groups of scholars, 'You must stop here, you may not pass the dead-line,' and you doom knowledge to the rank of nescience. You turn it into obscuration. So long as we do not know that the thing we study has relations outside the range of our search, we may flatter ourselves that we can have a science of it without reference to anything beyond. The moment we discover that relations connect the object with anything further, there is nothing to do but to hold our supposed science in suspension, till we find out how much that seems to be true at the near end of these relations is modified by following along toward the far end of the relations. That is, you cannot have a science of an abstraction. You can have only fore-studies of those phases or aspects of the whole which the abstraction reflects. Science is an accounting for all the relations which put in an appearance when we try to get knowledge. We can no longer hypnotize ourselves with the notion that we can construct science by arbitrarily ruling out types of relations which it is inconvenient to consider."

Between these extreme views every scholar must find himself. There is something to be said for both extremes. As far back as we can go in the history of thought we find that something was all the time being said for both. In spite of the attempts at comprehensive philosophy all the way along, my impression is that the former view has held more of the ground and a larger part of the time than the latter. However this may be, we are now swinging into a scientific era in which we shall give ourselves fewer airs about the type of knowledge which becomes impressive by arbitrarily limiting its outlook. We want exact knowledge whenever we can get it, but we are growing impatient with kinds of knowledge which may be made to seem complete in themselves by ruling out of consideration the connections with other things which contradict such completeness.

The movement on the social side may be illustrated in this way: If I were called upon to mention the ten most influential books ever written in political science, I should feel quite safe in naming to any competent committee of award as one of the titles in such list Montesquieu's *Spirit of the Laws,* published in 1748. That work repays careful reading today by anyone wise enough to read it understandingly; yet it is not a textbook from which we can learn the sort of political science taught now. It gives us an impression of law as something which has a self-existent being transcending men. Probably more because of that fact than in spite of it, the workings of law as exhibited in the book seem awe inspiring. They have a certain resemblance to reality, but they are not reality. Today we want to know how men get into office, just why they want to be there, what the inside meaning is of the acts they perform when there, how legislative bills are framed, who starts them, by what combinations of influences they are enacted or rejected, what laws are enforced and why, what laws are dead letters and why, etc. But at the same time we want to get this information fitted into place with all the other classes of information that give us a general chart of the kind of program which all sorts of men in our day are following. We have less use for large generalizations that are like graven images of symbolic society, and more use for views of men as they are in real life, even if the views lend themselves to less rigid statements than more artistically contrived symbols.

Or let us take as another illustration the abstraction "the economic man." For the larger part of the nineteenth century this conception was one of the most dependable tools that pseudo-science ever employed. But that is an altogether too familiar way of speaking of it. I should rather say it had the power and the precision of a Roman legion in attack or defense. But again the abstraction is such a thin section of life that we rate it today as an equally thin section of science. The conception of "the economic man," a human calculating machine operated solely by the impulse of material gain, misinterprets high and low in actual affairs as grotesquely as Opper's caricatures misrepresent both the magnates and the plain people. When Mr. Morgan leaves Wall Street and for a fortnight personally conducts a train load of clerical guests to and from a religious convention on the Pacific Coast, or when he scours Europe for art treasures, he is not "the economic man"; and for one I very much doubt if he is in his private office during business hours. When the neighbors in the slums share their dinners with poorer neighbors, they are not "the economic man." We get nearer to men as they are today by tracing their actions back to the real mixtures of valuations and purposes that impel them, even though that account of their actions refuses to fit into the pigeonholes of the older categorical sciences.

A slightly different sort of illustration tells the same story, and I shall develop it at some length.

The other day, I happened to take up a book published in 1908, under the title *Economics,* by Nearing and Watson. It was written as a textbook for an introductory course in economics at the University of Pennsylvania. It would be entirely out of my province to express a judgment whether it is on the whole a good book or a bad book for the purpose. That is not my business. In either case the book is a rather astonishing reflection of the modern propensity to disregard scientific categories and to get busy with the question, "What is going on in the world?" This textbook in economics begins with a chapter on "Prosperity"! That is very much like beginning a textbook on chemistry with a chapter on the food supply. Perhaps we shall come to it. I do not know. My point is that for better or for worse we are in revolt all along the line against the stilted shapings up of real relations in advance which turned our whole scientific territory into a rococo landscape garden.

At the end of this opening chapter on "Prosperity," which could hardly have been more inclusive in its implications if it were an appendix to John Stuart Mill's essay on *Utilitarianism*, there are seven questions for study, and these furnish the substance of the present illustration, namely:

1. *Should real prosperity include every member of the community?*

Sure enough! Should it? A decent and timely question! Who knows? Who knows how to find out? Certainly no special science that has ever been defined. An answer that purported to be scientific from one of these special viewpoints would be as impertinent in general as a dictum from the American Statistical Association prescribing a standard of church architecture. What is prosperity? What are its constituents? What are its conditions? What are its manifestations? What are its effects? The only way to arrive at even provisional conclusions on such far-reaching questions as these—and they are all raised by the question set for preparatory exercises of the minds of Pennsylvania undergraduates—is by way of some sort of preliminary survey of what is taking place on the whole in the course of human experience, determining therefrom just what we mean by the popular term "prosperity" as a symptom or partial product in this whole sequence of occurrences, and then by ascertaining the functional meaning of "prosperity" so explained in connection with the further fortunes of the men concerned.

2. *Is a nation with a great foreign trade and extensive manufactures a prosperous nation?*

Cable "Asquith, Downing Street, Collect"!

In a country with a land question, a labor question, a Lords' question, an education question, an establishment question, an Irish question, a near Eastern question, a far Eastern question, a variegated colonial question, and last but not least a Kaiser question, how much "British trade" makes or mars England's prosperity—well it does present a rather perspicuous problem for undergraduate economists, doesn't it?

3. *What has been the most important factor in developing the present prosperity of the United States?*

I hope the Pennsylvania economists have found out, and I hope they will tell the rest of the world whether that "most important factor" is still working full time. Some people think the most important factor has been the "little red schoolhouse." Some think it has been the "New England conscience." Some think it has been the Maryland type of religious toleration. Some think it has been the Abraham Lincoln spirit of democracy, and so on. I wish I were wise enough to settle the question. I am wise enough at least to know that the question never will be settled until we have a social calculus which can strike an accurate balance between all the physical and moral and spiritual factors that have molded American experience. No special science will ever give the answer.

4. *What are the chief differences between a nation in a state of economic deficit and a nation in a state of economic surplus?*

Any university in the world might strengthen its historical staff from the undergraduate body of the University of Pennsylvania, if those young men actually controlled the range of induction necessary for an answer to this general question. What are the chief differences between an *individual* in a state of economic deficit and one in a state of economic surplus? Those differences depend on more permutations of circumstances than can be brought under the categories of any special science. For instance: one individual is in a state of economic deficit because he has dropped all his money at the race track; another is in a state of economic deficit because he has spent all he possesses and has borrowed to the limit of his credit to buy and stock a farm. One individual is in a state of economic surplus because he left the saloon, after he had cashed his pay check, without spending any of his week's wages. Another individual is in a state of economic surplus because he has not had quite enough time to blow in the whole of his inheritance. The differences between these pairs of men are not describable or computable to any great extent in terms of the market. In like manner one nation may be in a state of economic deficit as a result of squandering millions in creating Versailles and in breeding its human parasites. Another nation may be in a state of economic deficit as a result of taking over monopolized lands and parceling them out on easy terms to a population of peasants that had been kept in a condition hardly above the level of the brutes. Economic deficits, for individuals as for nations, may belong anywhere in the moral scale between blessing and cursing. Our judgment of an economic deficit, as a human phenomenon, not as a mere matter of bookkeeping, has to reckon with the whole content and quality of the civilization in which the phenomenon occurs.

5. *What are the characteristic features of the American state of economic surplus?*

Does the question refer to Pittsburg or to the Nevada divorce colony? Does it bring up the New York insurance scandals? Does it hint at those retreats for temporarily innocuous Napoleons of finance at Atlanta and Leavenworth? Does it pry into the psychology of standpatism and insurgency? Is it prophetic of the conversion of Republican majorities of thousands into Democratic majorities of thousands in New York and Massachusetts congressional districts? Does it hark back into history and moralize on the meaning of the return from Elba? Is it a question for Fast Day or Thanksgiving Day or the Fourth of July? Is it a cue for the penologist or the preacher or the politician?

6. *Should the emphasis in economics be laid on production or on distribution?*

The question cannot be answered except as a corollary from the answer to the seventh and last:

7. *What should be the goal of economic progress?*

If there may have been a strain of facetiousness in my previous comments, I am now thoroughly in earnest. The fact that this question finds a place at all in modern textbooks of economics shows that there has already been a remarkable change of front in economic theory. Some economists realize this and boast of it, and even seem to think it is the one thing needful to give economic theory the floor for the closing argument on human relations. Other economists are still shy about admitting that there has been any change at all. They seem to fear that, if they should once expressly concede that economic problems must be considered from a different point of view from that of fifty years ago, some flank movement would get a start and throw their science into panic.

The truth is that, at the time when English economic theory was most confident and most intolerant, it made serious inquiry into the goal of economic progress as bad form in England as the discussion of slavery was in the United States Senate during the ten years previous to the appearance of Charles Sumner. The economic orthodoxy incarnated in Richard Cobden, and known as the doctrine of the Manchester School, was a peculiar species of moral know-nothingism and ethical agnosticism.

This is not my dictum. It was and is the almost universal judgment not merely of British moral philosophers, but of German economists from the middle of the century, or at least from 1870. If it be objected that the German judgment is an *ex-parte* judgment, I will not argue the point beyond observing that assuredly the German party is entitled to a hearing in the court of the world's science as well as the English party.

Manchesterism was a menace to human progress and an arrest of social science, not because its best-known advocates were bad men, but because they were good men, able men, zealous men, conscientious men, but men with a shriveled conception of the human process. They could not see that the economic process is only a primary function within the whole human process. Their voice was the voice of philosophy. Their outlook was the perspective of "British trade." The judicial form and the logical method of their reasoning silenced many whom it did not convince, and they long held their ground against socially and intellectually feebler folk whom they could neither silence nor convince. They had no means of measuring the cynicism of their view of the world. They spoke in tones of humanity and philanthropy. According to their light they were well-wishers and even benefactors of their fellow-men; but in the last analysis their formula of life meant: *There is no business but Business, and Manchesterism is its prophet.*

Now is there any business but "Business"? This is simply a more specific and intimate way of putting the question which I have called the great question of science, viz.: *What sort of a world is this anyway?* Is this a world in which "Business" is the only business or not? Is this a world in which men exist for the interests of "Business" or "Business" for the interests of men? Adam Smith, whom men have agreed to call the founder of English political economy, was no more in doubt about the answer to this question than you and I are today. But from the beginning of the attempts to build English economic theory on Adam Smith's foundation down to the time when the younger Mill became the *enfant terrible* of classical economics, there was diminishing freedom in England to recognize the existence of such a question; and this attitude of mind has left an influence as late as our own time. It is a part of the present aloofness of the social sciences of which I spoke in the second lecture. Scholars in the different social sciences have not yet arrived at an explicit understanding with reference to the methodological place which belongs to "Business" and the theory of it.

I do not know whether the specific incident of the proposal of this particular question in an elementary economic textbook in the University of Pennsylvania has much or little symptomatic meaning. That is not the point of the illustration. The main thing I am getting at is that there is a world of difference between any alleged science, whether economics or history or sociology or whatever, which assumes that its province is a portion of reality which may be considered as existing in, of, for, and by itself, and a science which perpetually holds itself responsible for connecting itself up with the whole process of life.

Summing up this long-drawn-out illustration and all that led up to it: We are merely puttering with scientific trifles, not proceeding toward scientific interpretation, unless our research is constantly controlled by orienting reference to the larger functionings of all that we investigate. How can we tell whether the emphasis in economic theory should be on production or on distribution until we decide, in some provisional way at least, what the goal of economic progress should be? And how are we to decide what the goal of economic progress should be? Shall we decide by allowing a certain type of economic interest to close the debate by edict, or shall we decide by bringing all economic relations under the lime-light of all the experiences of life which we can now command, and by finding out what their actual functionings are in the whole human process?

The discussion in the previous lectures certainly licenses me to answer the question tersely, without liability to the charge of dogmatism. It is not sentimentality, it is cold critical science which declares that every activity of life must be held answerable to the whole of life. We are not uttering a sectarianism, we are voicing the converging indications of all the science there is in the world today, when we declare that social science as a whole, not the preconceptions of any of its parts, must render the decision when, and how far, and under what conditions, any type of human activity—the economic for example—may be treated as an end in itself, and to what extent, before and during and after the analysis of it in isolation, it must be judged as means.

The stake that I want to drive down in this lecture is, that all our social science, ragged and random as it is according to the standard of the exact sciences—*all our social science together amounts to a certain tentative survey of life as a whole. This survey is a competent provisional measure of the subordinate functional value of any type of activity within the whole.* This survey gives us a connected view of life; not a complete view but at least a loosely coherent view, a view which is convincing as far as it goes, a view which is itself engaged in a constant process of correction, a view that may be shaped in a formula, although the formula is after all only a guide to further inquiry. This view of life completely effaces the view that "there is no other business but Business." The big business of men is to find out the capacities of things, and to find out the capacities of themselves, and in and through and because of all this finding out to harness all the physical and moral forces within human control into the main enterprise of transforming all the forces into completer men. The task of science is primarily to understand how far men have gone in filling out this career, and then to take account of the capital at their disposal for continuing the career.

My preparatory illustrations have taken so much time that I must pass abruptly to my formula. I simply interject the remark that the formula which I shall talk about now does not purport to be a solution of the symbolic equation referred to at the beginning of this lecture. I am dealing rather with the equation which states our question, not with the one that settles it; that is, the equation analogous with that with which we begin our simplest algebraic inspection. Just as we say at the beginning of the statement of the simplest algebraic problem: "Let x=the unknown quantity"; so the social sciences have reached that stage in their adolescence at which it is enlightening to state their problem in the form: *Men's experience is the evolution of human values.*

This then is the central formula by which all the social sciences today are expected to organize their reports of the human reality.

I could not find it in my heart to be very angry with you if you should reply that this formula says nothing. It would not surprise me if you should find in it merely that most vapid of platitudes known to the logicians as "the identical proposition." I could not blame you for the retort that it would be better to give up the pretense of having arrived at an actual perception, and to admit that my ideas have reached a dead center. It would not be strange if you should accuse me of thinking I have really said something, when my formula actually reduces to this: *Human experience is human experience;* or, *Human progress is human progress.*

I have indeed brought these charges against myself over and over again; and nobody is as much interested as I am in allowing them all the weight they deserve. The more I test the formula, however, the more I am convinced of its value as a tool; but I must take time to explain further that its value is not that of a settlement of anything. It is a gain to use this formula simply because it brings the whole range of investigation in social science within a field of view where it can be intelligently surveyed. As in the analogous algebraic case, our formula is essentially more interrogative than indicative. At the same time the question which it asks calls for interpretation of all the evidence in connection with the true center of orientation.

If I were trying to explain my meaning to an audience of biologists, I should venture, as a layman in their subject, to draw an illustration from the history of biology. If I correctly understand the facts on the biological side, biologists would be better able than social scientists to see the force of the comparison.

In brief the analogy is this: For a considerable time after the publication of *The Origin of Species* the scholars who were convinced by it believed that Darwin had accomplished more than presently turned out to be the case. That is, it was assumed that he had not only established evolutionism in the place of creationism, but that under the rubric "natural selection" he had discovered the exact process of evolution. There was a time therefore during which the theories of Darwinians might have been reduced to the formula: *Evolution is natural selection.* In other words, according to this interpretation the whole life process is an unfolding from within, not a molding from without; and second, "natural selection" is the method of that process. But there came a time, and I suppose it may be marked approximately by Weismann's appearance in the field, when biologists began to realize that the phrase "natural selection" had not cleared up the mystery of the life process, but had merely given a convenient name to the mystery. It had not explained the evolutionary process. It had merely focalized the fact that there is a process, and it had more explicitly asked the question, *What is the process?* Suppose that when biologists had gone so far one of their number had declared that the general formula of the life process is: *Evolution is natural selection.* It would have been quite in order then for the more acute thinkers to say: "It was merely an identical proposition. That only says *evolution is evolution.* So much goes without saying. By giving the name 'natural selection' to the undiscovered processes through which evolution goes on you have not detected the methods of those processes. You do not get ahead by calling those unknown processes 'natural selection.' You simply tag them with a new label. The problem still remains: *What are the processes?*"

As an *obiter dictum* I might add that, from a layman's point of view, this supposition fairly sums up the general course of thought among the biologists during the past fifty years. Whether this estimate is correct or not, I hope the situation which I have supposed among the biologists, for the sake of illustration, will throw some light on the situation in social science. As I see it, social science in general is now in a stage analogous with the pre-Darwinian stage in biology. There were men before Darwin who believed that the processes of life developed from within instead of being determined from without. It was not until the Darwinian period, however, that close analysis of the method of that unfolding process began to make it seem very real. Before that time science was having all it could do to establish the presumption that organic life history is essentially an internal, not an external, process. With Darwin and Wallace and their kind this alternative passed out of the range of scientific discussion. The presumption had become a conclusion, and the problem thereafter was not, Is the life process internal? but, What is this internal process?

As a general proposition social science the world over is not pre-Darwinian in the sense that it makes no use of the ideas of growth, of development, of evolution. In fact most social scientists imagine that they have fully assimilated the idea of development from within. Their language is saturated with the forms of the idea, and nine out of ten of them would indignantly deny that they lack any of its spirit. But really the sort of process which most social scientists are actually presupposing, is as external to real men as theological creationism was to the life history of organic species. Our social sciences are making of human experience not the givings and takings of actual men in their processes of accomplishing their several purposes. Our social sciences are still finding in human experiences the mystical maneuverings of those hypostatized entities that I spoke of in the last lecture—institutions, government, law, property, capital, labor, and what not. In our theories of experience these abstractions and generalizations from men's activities compose a fictitious world utterly external to the real men acting. These real men look to the objective critic, and they seem to themselves as out of place in such interpretations as visitors from the country do in their actual plight when they get caught in the swirl of the city.

One of the reasons why the sociologists have had such a hard fight for a hearing is that we have tried to turn attention to the later problem before social scientists had solved the earlier problem. We have tried to show our peers that we ought to try to find out what the internal human process is, before it was settled in their minds that there is an internal human process as contrasted with an external.

It is in this state of social science that my formula fits, and it is to social scientists in this state of mind that my formula is addressed. Social scientists are not metaphysicians any more than the biologists are. There may be, outside of our range of discovery, cosmic and transcendental meanings within which everything pertaining to this planet has the same ratio of importance which our world's dimensions have to the extent of the physical universe. That, however, is not the affair of social science. Its task is to find a coherent meaning for that part of experience which is within human powers of observation. Men are not competent to prove that men are the most valuable phase of the universe. With their present knowledge, however, men are unable to locate anything within their ken which appeals to them as more valuable than men. Whether new light might dawn upon us to modify this judgment it would be idle to guess. The fact is that for our present intelligence the meaning of this world culminates in its furnishing resources for the evolution of the values of men.

No man can prove why our world exists at all. On that question we have only religious and speculative beliefs. But the world being given, and our experience with it being as it is, no interpretation of it can permanently convince our minds which does not make it a system of means and ends with their provisional terminus in men. The utmost stretch of our imagination ends with the thought that other sentient beings in the universe may be vastly superior to men, and vastly more important in the final accounting; but since this is merely conjecture our interpretations lose reality when we attempt to explain beyond human values. No argument can convince men, for instance, that their place in the economy of the world is to keep up the productive powers of the soil by fertilizing it with their decaying bodies. Or again, no logical contradiction would be involved in an argument to the effect that the ultimate meaning of men is their employment as a self-perpetuating stock company to stage those hypostatized abstractions of which I have spoken. When brought face to face with alternatives of this sort, however, men find themselves more and more unable to assume that any possible argument of this kind can correspond with reality. Our judgments of means and ends all point in the other direction. Everything else mundane is means to men, and men can be rated as means only to completer men.

But men are not constant terms in a world equation. Men are not, like the atomicities and specific gravities of chemical elements, fixed and unchanging. Men are evolving combinations of qualities and capacities. We all know this, although we have not yet put the proofs of it in such evident order that it is a very vivid truth. If necessary to illustrate we might recall the fact that the ancient man was a tool user, while the modern man is a machine user; the ancient man relied upon his individual memory, the modern man employs all sorts of records, or, as they have been called, the social memory; the ancient man was relatively unfit to co-operate with his fellows, the modern man is relatively adjustable to co-operation with his fellows; the ancient man was relatively unsympathetic, the modern man is relatively sympathetic. These obvious and familiar differences are merely convenient representatives of innumerable more minute and complex contrasts between less evolved and more evolved men.

Now in all that I have said I have not been trying to put an argument in the form of logical premises and conclusions. I have been trying to exhibit the association of ideas that is steadily arranging itself in our thoughts. We are putting these two distinct judgments into touch with each other: *first, we interpret the experiences of life in the final appraisal as means to the uses of men; second, we interpret men as evolving values.*

All that I have argued then is simply a digest of these combined judgments. I have urged that the scientific view of the world, so far as we have got it, comes out at its clearest expression in the formula: *The experience of men is the evolution of human values.*

This result does not of itself add to the sum of our knowledge, and I am taking special pains to guard myself so that I cannot possibly be understood as supposing that it does. The importance of the formula is in the added distinctness and unity which it gives to our problem. When we arrive at this outlook our vague amateurish question: "What sort of a world is this anyway?"—or I might better say our vague mooning unconsciousness that all science has a question in common—begins to emerge from this condition and to ask the less vague and more critical, more related questions: "What are human values? Why are they? How may we know them? How are they produced? How are they to be rated one with another? How does such knowledge of them as we may get bear upon our programs of life, that is, upon further production of human values?" In other words, recurring to the previous comparison, the formula *Men's experience is the evolution of human values* is a signal for the same sort of search into actual processes which began in biology with the belief that evolution is "natural selection."

Now I know very well that the whole plan of these lectures impresses you as so remote from your interests that you have hard work to force yourselves into attention to them. This is precisely the state of mind which gives sociology its vocation. *As a general proposition social scientists are not interested in the fundamental logic* *of the relations which they profess to interpret.* Their interpretations have consequently been pitifully superficial, fragmentary, and incoherent. Some scholars could not see the forest for the trees. Some could not see the town for the houses. Some could not see men for their cranial dimensions. Some could not see them for their different technical devices. Some could not see men for their diversified arrangements for group control. Some could not see men for their languages, some for their varieties of religious belief, and so on, and so on. From the beginning the sociologists have undertaken to convince all their fellow social scientists that it is a radical blunder not to undertake a general survey which might bring all these phases and incidents of experience within some connected view. We have made all sorts of false starts in our approaches to scholars of other ways of thinking. On the other hand, from their own points of departure and without attention to the sociologists, scholars of other ways of thinking have been approaching the sociologists' way of thinking. Today there is so much of this general logic of experience in the premises of each special division of social science that you will never rise above third-rate rank in any department of social science unless you have oriented yourselves by this primary methodology.

In spite of our specializations and our distracted inattentions human experience is a connected enterprise. It is the experience of the earlier man-brute skulking in his cave with his she-brute mate, becoming himself in drawing near to his kind, in pitting himself against his kind, in joining hands with his kind, and finding himself in progressive partnership with his kind. This evolution is not ending but beginning. Social science is the self-consciousness of this experience. It is men's self-knowledge of the values thus far achieved; it is men's perception of other values within their powers of realization; it is men's acquired technique for carrying on the achievement; and it is further pursuit of the achievement itself.

In these lectures so far I have merely located the center of orientation, and indicated the outlook of the social science which aims to survey life from this point of vantage. In the lectures that remain I shall try to show how this idea of science in the large works out in certain more specific aspects of the human problem.

LECTURE VI

THE DESCRIPTIVE PHASE OF SOCIAL SCIENCE

The five lectures that are behind us in this series have presented a view of social science which may be found piecemeal in a great many books, but I cannot refer to a writer who deliberately sums up the case just as I have presented it. In a way Professor Robert Flint's last book, *Philosophy as Scientia Scientiarum and a History of the Classification of the Sciences;* in a way Wundt's *Methodenlehre;* in a way Schmoller's *Grundriss der allgemeinen Volkswirthschaftslehre;* in a way Bernheim's *Historische Methode,* and a great many books of smaller caliber contain, partly in terms partly by implication, all that I have said.

Before expanding the argument more concretely I must hark back to my earlier statement that the general outlook of the sociologists is not essentially different from that of most social scientists today who have any outlook at all. The peculiarity of the sociologists, in contrast with the majority of their colleagues, is that the sociologists insist that all social science should take these solar observations every day and should compute its course with reference to them; while other social scientists as a rule regard these orienting calculations as more or less useless for practical purposes.

Sociologists have contended for the principle that the aim of social science should be nothing less than coherent interpretation of human experience in the large. Men who propose a more restricted scope for social science, or for a self-sufficing fragment of it, have accordingly regarded the sociologists as visionaries who were concerning themselves merely with castles in the air. These are the men who have looked upon sociologists as reincarnations of astrology and alchemy, as kinds of people who take themselves away from contact with the substantial things of science and who conjure with unrealities. I have found a passage in an obscure German writer of the eighteenth century, in which geographers are held up to ridicule and contempt for precisely the same reason. They are said to care for nothing that takes place on the earth, but to be busy simply in drawing imaginary lines.

Trying to see ourselves as others see us, we sociologists must admit that appearances have been against us. Our attempts to plot human relations in the large, without confining ourselves to any single group or activity of men, have very naturally impressed people who were dealing with more particular material much as representing the earth as criss-crossed with meridians and parallels must have impressed men who measured their land by the number of their horses' paces, or who traveled by following the beaten roads or the natural landmarks. But in fact, just as the geographers' real interest was not in the imaginary lines but in the continents which the lines helped them to understand, so the sociologists' real interest is not in the abstract schematology of human relations which we are working out but in the experience of the men reflected in those forms.

More than this, by our fault or our misfortune we have created the impression among other social scientists that we are fantastically credulous about the possible competence of social science. We are supposed to imagine that a geometry or an algebra of human experience is possible which will measure the life of mankind in all its dimensions from beginning to end. The truth is that we probably have at least no more extravagant ideas about the reach of our possible knowledge than other social scientists. On the contrary, we have contended that the older phases of social science are resisting exposure of the comparative flimsiness of their results. This exposure would inevitably follow analysis of their program along the lines of actual relationship which sociology has drawn. Our real fault consists not in overrating the possibilities of the science that may be, but in too irreverently uncovering the nakedness of the science that is.

At different times I have met quite a number of people in Europe who wanted to talk about our Civil War, and who had settled opinions of a rather explicit sort about the future of the United States. Before they had gone far, most of these people dropped some remark which plainly showed that they supposed the war between the states was fought in South America. Nothing more is necessary to explain why their theories about the future of the United States were more amusing than cogent.

The sociologists urge that our social sciences have proceeded in accordance with amateurish notions of the motivations and the relationships of the different human conditions, interests, and activities, somewhat like the notions of the earth's surface which prevailed before the geographers had fairly visualized locations and proportions. We have urged and still urge that the conclusions reached by students of human experience, from whatever angle, would be protected against provincialism and immaturity if they were obliged to check themselves up by comparison with the charts of human relationships in general which the sociologists are constructing.

On the other hand, my impression is that the sociologists in general are more interested in stimulating a demand for effective co-operation between social scientists of all kinds than they are in building a more stately hermitage for sociology. I do not feel quite as sure about this latter conjecture as I do about the general argument which I have thus far presented. From this point to the close of these lectures therefore I shall speak for myself alone. This is not because I want to break away from the body of sociologists, but because we come now to the point where the real test of the meaning of the sociological movement for social science in general is to occur. The sociologists have arrived at no very specific agreement among themselves about the ways in which they propose to meet the test. I want to make it very clear, therefore, that in what I shall say in the remainder of this series I am assuming the entire responsibility. I am not committing any of my fellow-sociologists to my program. It may be that other sociologists would not indorse my conclusions. My impression is that no sociologist is likely to question the desirability of the policy I shall sketch, considered by itself. There may be a good deal of objection to my apparent surrender of the claims of sociology as an independent science, and to my almost complete silence about the inside phases of it, which are the technique of specialists in its peculiar subjects.

As to this I simply recast what I have said before: There is no such thing as an independent science in the strict sense. That whole manner of speaking, and the whole organization of the *personnel* of science in accordance with it, mark a juvenile stage of scientific consciousness. There are detachable processes of investigation, and there are relatively isolated phases of reality to be investigated, but the thing to be known in the final summary of investigation is a connected whole. To the extent that processes of investigation become actual contributors to the completest power of knowledge, they are necessary co-operators with other processes in controlling all the facts about this whole. In these lectures I am not particularly concerned about bringing sociology into the foreground, nor about discussing its peculiar problems or processes. I am interested in showing that there are problems and processes which are common and vital to all social science. If so much can be established, I have no fear about the ability of the sociologists to make good in their special part of the co-operative work.

In passing to the application of what I have said under the five earlier titles, I must again call attention to the fact that social science in the United States has not outgrown leading reference to the question, What can we make out of our subject that will be taken up by the Bird Center High School?

I will not compromise my cause by consenting to the inference that I think this question never should be asked. In the long run, science, like all other human achievements, can be only a certain stage in advance of general intelligence. If we were calculating for the future of science on its own account alone, we could not afford to ignore the Bird Center High School. On the other hand, there are quasi-scientific processes, with the pedagogic interest chiefly in view, which have the same relation to the increase of knowledge that selecting school furniture to match the lengths of the pupils' legs has to research in physics. I do not say that too much attention has been paid in the United States to the organization of such knowledge material as we have for use in our schools of all grades. I do say that we have released too little research ability. We have dedicated too little force to the untrammeled function of making knowledge broader and deeper. I shall say something later about the pedagogical uses of social science. At present I am not referring to that consideration at all. Of course science would be like music in a population of the deaf if there were no provision for its publicity. That, however, is a matter logically subsequent to the work of gaining knowledge. At present therefore I am referring altogether to the interests of research.

Leaving further qualifications until later in the discussion, I resume the main line of argument. I have said that *the primary function of social science is to interpret men's experience in passing from stage to stage in the evolution of human values.*

Suppose the men available for research in social science in a university with the equipment of ours should come to substantial agreement about this proposition. Suppose they should deliberately resolve themselves into an institute for investigation in social science. Suppose they should adopt the express purpose of contributing toward answering the question: *What is human* *experience, and how stands it here and now with the values that make up its meaning?* Suppose my colleagues delegated me to draft a plan of procedure in furtherance of that purpose.

I should begin with a brief digest of the reasons which had led to the formation of the institute or academy of social science. I should recommend that a chairman of the body be chosen from time to time and that the selection in each case should have reference to the particular kind of work then in progress. I should hope accordingly that the chairman chosen at the outset would be a man of catholic intelligence and interest about social science as a whole, and able to maintain an attitude of judicial impartiality between the claims of his own particular problems and those that are waiting for solution elsewhere.

The first business which I should propose after the body had elected its chairman would be consideration of the question: What piece of work within the field of social science may we most profitably undertake?

The course of thought which had led to the combination for co-operative research would have demonstrated the necessity of this first step. Everybody would have become aware, even if only dimly conscious of it before, that an organization numbering perhaps not more than forty scholars could hope to make a real contribution to social science, as distinct from a mere rearrangement of existing knowledge, only by selecting some passage or aspect of human experience, and by intensive work upon it with all the means of investigation controlled by the group.

Suppose that all the difficulties involved in such a choice were overcome, and that the group had decided to investigate the experience of the French from the death of Louis XV to the fall of the first Napoleon.[1]

The next feature of the plan which I should propose would be the passing of the group into committee of the whole with a historian as chairman. Of course a task might have been undertaken in which a political scientist or an economist would be a more useful chairman.

The first task which would confront the group under the formation suggested would be that of taking into consideration the state of the evidence, and of the theories that have been advanced about the meaning of the evidence, as a preliminary to its own discussion of the situation.

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[1] For reasons which will appear in the next lecture, I add the comment that no opinion about the relative importance of this particular passage of experience was implied by taking it as an illustration. In these lectures I intentionally refrain from expressing my own views about the kind of investigation which it would be most serviceable for such an institute to undertake.

I use the designation, "the descriptive phase of social science," for this particular aspect of every scientific process. Neither on this phase nor on the others to be treated in the following lectures can I go into minute questions of technique that come into prominence in the respective stages of investigation. I can refer only to certain cardinal methodological considerations.

Let us suppose then that we have gone so far as to face the question, *What is known and what has been thought about the selected passage in the experience of the French?* I am not now leading up to a particular scheme of description. I have no theory of my own to exploit about the meaning of the French Revolution. I know simply the more familiar literature of the subject. I have gone into it just deep enough to be convinced that very few last words have been said about its meaning, and the more final they seem the more commonplace they are likely to be in effect. On the other hand, the attempts to interpret the facts have left me in precisely that state of suspended judgment with which it would be desirable for our committee of the whole to begin its work.

Assuming a condition of complete open-mindedness; assuming that the scenes in the human drama enacted by the French between the dates selected mean something as a fragment of all human experience; the task of our committee of the whole is to get at a description of the facts just as they were.

For over a hundred years the historians have been showing that this process of ascertaining the bare facts is by no means as simple as it sounds. I cannot rehearse even the chief points of their discoveries in this connection, but I must seize upon one main feature of the whole affair. The historians found it out for themselves, but the sociologists have taken up the discovery and I think they have added something to the historians' use of it.

The moment the committee moves in the direction of the task of exhibiting the facts, it encounters the reality which I spoke of in the last lecture, namely: *No fact can be described just as it was unless it is described in all of its functionings as a phase of the whole complex of experience within which it occurred.*

Robert E. Lee obeyed the mandate of the state of Virginia, not that of the federal government. Was it consummate treason or consummate patriotism? Men are still describing it in both terms, according to the point of view. In reality it was neither. It was the reluctant choice of a noble man caught between the conflicting duties of an impossible situation. No one can interpret Robert E. Lee without interpreting the whole previous history of the United States, and not the political history alone but the industrial, social, and religious history as well.

I may be allowed the remark in passing that, in my modest opinion, we have not yet so exhausted the interpretation even of our brief American history that the sort of co-operative work upon it for which I am pleading would be thrown away.

But this is the point: If we cannot interpret the crucial act in the life of one man without interpreting the history of his whole nation, how much less can we interpret the thousands of leading and the millions of led French, from Rousseau to Robespierre, and then from the tenth Thermidor to Waterloo!

Suppose our committee of the whole is thoroughly alive to all this. At the outset of its work of describing the French as they were in 1774 it encounters the puzzling fact that they too were historical products. In order to begin to describe them the committee must be informed about their antecedents. Some provisional satisfaction of this requirement must be reached, or there could be no intermediate study of experience until we had made out absolute beginnings and had reconstructed the historical sequence in full to the date of the proposed inquiry.

Let us suppose that the committee has somehow adjusted this difficulty. How should its work proceed?

As I am merely a layman in knowledge of the period I have chosen for illustration, I make no apology either for the purely conventional or for the unconventional part of my approach to a schedule of the subdivisions into which the work of assembling and of sorting the evidence and the hypotheses would fall.

The usual device of subcommittees for different parts of the work may be taken for granted. My plan would accordingly provide for a subcommittee on organization with reference to the particular work in hand. It would be the duty of this committee to recommend a list of subcommittees adapted to the division of labor which seemed provisionally expedient; it would be the further duty of this committee from time to time to recommend reorganizations of the subcommittees as the progress of the investigation might indicate.

As this subcommittee on organization would presumably be composed of men whose study of the period had given them somewhat definite opinions about the content of the experience to be described, these same men might also be charged with the duty of presenting a general working sketch of the facts to be investigated.

For further purposes of illustration I will anticipate the first report of the subcommittee on organization. It very properly puts at the head of the list a subcommittee on general bibliography. On this committee at the outset the rough work would fall. On an extended scale its initial procedure would be that which every lecturer on history to graduate students undertakes in a more limited way in connection with each of his courses. It would be the duty of this committee not merely to collect the most important titles, but to classify the significant literature on the period from two points of view: first, with reference to the kind of sources used and the methods of using the sources; second, with reference to the hypotheses or presuppositions by which the different writers had wittingly or unwittingly guided their work.

The reports of this subcommittee from time to time would inevitably have the effect of recommendations about the divisions into which the descriptive work should fall. Whether the members of this subcommittee had begun the work with or without decided opinions about the groupings of facts within the period, they would surely gain impressions from their assortings of the secondary literature which would make them earnest debaters in the later consultations of the whole body. They would arrive at firm convictions about the necessary classifications not merely of the secondary but of the primary sources. It is altogether probable that they might reach judgments about tentative schemes of description quite at variance with those submitted by the subcommittee on organization. If the evidence should lend itself to more than one hypothesis, every difference of this sort would tend at last to make the work of the whole body more convincing.

I assume that the subcommittee on organization would be better acquainted than I am with the period in question, and would be able to propose more adequate tentative subdivisions of the work than I could. My further anticipations therefore are merely the conjectures of a layman about possible divisions of labor.

The specifications which I assume that the subcommittee on organization would next submit would provide for a subcommittee on each principal phase of the activities of Frenchmen visible at the accession of Louis XVI. This list of subcommittees would necessarily represent a hypothesis about the number and nature of the distinctive phases. It would be the working form of the organizing committee's hypothesis about the cardinal features of the facts to be reduced to a composite picture. In so far it would be an assumption about the conclusion before the evidence had been collected. If this assumption were adopted in such a way that it would in any degree predetermine the findings of the committee of the whole as to the phases of the experience which are to be considered as cardinal, it would by so much impair the value of the entire inquiry. The fact that numerous subcommittees were charged with investigation each of a different phase of activities supposed to be of cardinal importance in the given situation, would best insure against this sort of error. Each subcommittee would find that the phase of the experience with which it was primarily concerned was affected by other phases, and between them they would be able to amend the schedule as the work proceeded, by increasing or reducing the number of factors to be regarded as principal.

Still further, the work of each of these subcommittees would in part overlap and duplicate that of the subcommittee on general bibliography. All of the secondary writers would have depended, in one degree or another, upon the particular kinds of evidence that would be uncovered in greater abundance by the more intensive work on the special subjects. The overlapping and duplication would be more of a gain than a loss, however, not chiefly because they would be checks upon oversights, but because they would be positive exhibits of the interconnections of the same facts. The different committees would come upon the same evidence from different angles of approach, or upon evidence having important bearings upon other subjects than the one with which they were primarily dealing. The duplications would stimulate inspection of each kind of evidence in all the relations in which it had a value.

To take an illustration from a parallel case: In working on a problem in the theory of financial administration in Germany in the seventeenth century, I casually turned up evidence that would be worth considering not only in each of the main divisions of social science as ordinarily understood, but in the history of language, of theology, of education, of several physical sciences, and particularly of the practice of medicine. In each instance the sort of evidence which I happened upon while looking for something else might modify historical conclusions about the subject in which the evidence primarily belonged. Yet these particular items might long escape the attention of men who were searching directly for them in more expected connections.

It is safe to assume further that a subcommittee would be formed on the physical conditions in France at the date selected, and on the use which Frenchmen were making of their physical surroundings. What were the physical means of the French, in terms both of the natural endowment of the country and of the known technique for exploiting nature? What scope was there for Frenchmen to get a living? The inquiry would naturally range from the scrappy sort of evidence in Arthur Young's *Travels* to scientific and official surveys of the resources of the country.

There would of course be another subcommittee on the property relations, and their bearings upon the living which Frenchmen actually did get. Here would be lawyers' work; but the problem would be not only what laws were on paper, but whether the laws on paper were in force, and how the laws in force compared with the laws in writing. Moreover, this committee would have to find out what customs not written were stronger than laws that were written, and in just what ways these coercive customs molded the people. It would have to find out what differences there were in the shares of Frenchmen in the gross output of material goods; whether these shares corresponded with the respective services of Frenchmen to one another; and if not, why not.

There would have to be another subcommittee on the public law relations of the time, their variations between theory and practice, and their bearings upon the private life of citizens.

Another subcommittee would deal with the people in their ecclesiastical relations. The church historians would have to take the lead here, and they would have an excellent opportunity to illustrate the ever-present fact that things are not necessarily what they are labeled. To what extent was the church life of the French at this time a medium of religious expression, and to what extent was it other things, for instance a subtle medium by which some classes controlled other classes?

There ought to be another subcommittee on the state of knowledge and opinion in France. What were Frenchmen thinking about, and what were they thinking about it? To what extent were they thinking about the same things, and to what extent were they thinking the same thoughts about those things? To what extent did thinking about different things, or thinking different thoughts about the same things, divide Frenchmen into groups pursuing different interests, and what relations did these thought-groupings have with the groupings formed in other ways?

This last question illustrates one of the occasions which these subcommittees would incessantly have for comparing notes, and for revising judgments as to others' findings.

There should be a subcommittee on the aesthetic life of the people. It should investigate not merely the status of the fine arts as usually understood. It should try to find out to what extent, and in what quantities and stratifications, artistic expression was a part of the life of Frenchmen when Louis the Stupid took the place of Louis the Sensual. It should record not only the cathedrals and the palaces which they built, and the pictures they painted, and the statues they carved, and the songs they sung. It should have attention for the songs which they did not sing, where life is desolate without song. It should find out who amused himself, and who slaved that the other might be amused. It should search out the scale of the distribution of enjoyment in the aesthetic sense, and it should stand ready to fit these facts into their share of prominence in the total situation.

There should be a subcommittee on the struggles for power at the moment. What men were planning to change their position in the social scale, and why? What interests were impelling these men? Did the prominent individuals represent themselves alone, or were they thrust forward by groups who used them as battering-rams or as scapegoats, or were they blends of the two characters? Did they see opportunities to promote their own private ambitions by serving as tools for many incapable of wielding their own tools?

There should be a subcommittee on the moral codes of Frenchmen in those later days of the Bourbons. What did Frenchmen think wrong and right? What was their standard of wrong and right? Was it an individual or a social standard? Was it a standard of worth or of enjoyment? Was it one standard for all or a sliding scale? What sanctions had it? What were its actual bearings upon the life led by Frenchmen at the time?

There should be a subcommittee on the relations between Frenchmen and other Europeans of the period. To what extent was the life of Frenchmen at this time their own life, and to what extent a life forced upon them by their neighbors? To what extent was it a reaction of their attempts to force a life upon their neighbors?

I do not know enough about Frenchmen of this period to know how many more subjects should be assigned to as many subcommittees. For the purpose of this illustration it is not necessary that I should know. I have said enough to carry my point. The committee of the whole which had divided itself into so many subcommittees would soon be in full cry after aspects of the life of Frenchmen which had escaped their preliminary survey.

I was in the generation of college students that saw the transition from the textbook to the laboratory method in science. I used to see experiments in chemistry in which chemical processes were demonstrated. In physics I never saw an experiment that proved anything. The college possessed a small junkshop of physical apparatus which was never in order. All the good we ever got out of it was an unbroken series of exhibitions that those contrivances could not be made to work as the theory said they should.

We have not passed out of the stage of social science in which there is a similar contrast between theory and actual human experience. From Herodotus down a few men have been able to give literary renderings of men's actions which made more or less effective appeals to other men's imaginations. During the last hundred years men have put more and more effort into the work of composing versions of human experience which should literally correspond with reality. I do not deny that they have succeeded in some degree, and on the other hand it would be entirely unreasonable to suppose that human experience could ever be measured as accurately as physical phenomena. Scholars know, however, that it is well within the range of men's ability to understand human experience, both in detail and in the large, much more precisely and comprehensively than it has ever been interpreted thus far. One indispensable condition of this advance is willingness to apply the necessary amount of mental force. I think I have sufficiently indicated that the relatively simple descriptive stages of inquiry into a social situation are far beyond the capacities of one individual or of a few individuals. If the description is to be as thorough, for instance, as the preparation of an important case for trial in court—and surely this is not an excessive demand in the name of science—it must enlist the energies of many individuals.

I was in London at the time of the final hearing of the Alaska boundary claims. The facts involved did not present a thousandth part of the complexity of the facts in the experience of Frenchmen during the forty years taken for our illustration. I do not know how many people were employed first and last in working up the Alaska case. I remember that I happened to be in the courtyard of the Hotel Cecil when the evidence was carted up to the entrance of the rooms where the commission was to sit. The amount of this material which I saw filled two large vans. I do not know how much more there was. Yet this evidence covered merely the different aspects of the relatively trivial and simple matter of locating a boundary line in mostly uninhabited country. What idea should we form of the comparative bulk and comparative complexity of the evidence that would be necessary for drawing all the lines of relationship in an authentic picture of all the inhabitants of France on the eve of the Revolution?

Before leaving the preliminaries leading up to a description of the experience we have used for our illustration, I must remark that our committee of the whole has so far planned only one thin section, so to speak, out of the several strata of description which evidently must be drawn over and into one another in order to cover even this brief period of forty-one years. The fact that men's experience is an incessant evolution of human values is in evidence in this case after the most superficial inspection. We speak of Frenchmen of the period as though they were relatively as constant as the Rhine or the Alps at the same period. In reality the whole meaning of the period is to be traced in the inconstancy of the French during these years. In the first place members of three generations were on the stage of action during this time. Some men who helped to drag him to the guillotine were not born when Louis XVI was crowned; and the sons of some of these fought under Napoleon on the day of his final disaster.

In the second place, these mere comings and goings of the generations are by no means the surest signs of the systole and diastole of the evolutionary process, of the sinkings and risings of personal qualities and social *morale* in which human values are transmuted. How many sittings must the camera of history demand of the

Frenchmen of these four decades in order to get all the negatives which must be merged into the composite photograph? If our committee is at last able to describe Frenchmen of the first year of the period, is it certain that the picture corresponds with actual Frenchmen every year down to the meeting of the States General? If so, how soon was the transformation so great that another picture would be required for identification? Did a couple of months or a couple of eras separate that fifth of May from that fourteenth of July, and can our committee consider its labors closed with a description of the French at either date? Would Lafayette at that stage have recognized as the features of his countrymen a truthful picture of Frenchmen as they were to be in that arrogant "*Year One*" of the French Republic? If he could have credited that picture, could his credulity have been stretched to accept the picture of the fourth month of that year, with Frenchmen changed to regicides?

Even my ignorance of the period is not so naïve that I suppose all Frenchmen changed their characters as often and as capriciously as the coteries that controlled in Paris. But how often and how thoroughly did Frenchmen change their individual and group equations, from the

Frenchmen who loathed the disease of Bourbonism to the Frenchmen who welcomed the remedy of restored Bourbons?

Our committee of the whole must find its answers to these questions, and of course it will not, as the terms of the questions might seem to imply, find that the answers coincide with the mere shiftings of political control. But what were the essential changes in Frenchmen, especially during the second half of the period, after their public life had changed from panoramic to kaleidoscopic?

I have mapped out as much preliminary descriptive work for our committee of the whole as my time permits me to sketch, and in the next lecture we must pass to another aspect of the scientific process. In closing I want to make it clear that I am not engaged in a diversion of utopian word-painting. I have not conjured up this illustration as a play of the imagination, as a parody of the literal process which scientists must perform. On the contrary, every individual who studies a past or present experience, or stands thoughtfully contemplating the paths opening in the future, has to encounter all these problems of relationship. He is bound to go as far as his individual powers permit toward performing this whole preliminary process along with the later processes. The validity of all his conclusions, and the probable contribution of all his actions to the main work of promoting the evolution of human values, will depend on his success in guessing out an approximate balance of these relations. No individual can ever by his unaided powers accomplish much more than a sagacious guess.

How obvious it is then that, in order to discharge their function of interpreting to all the experience of all, scholars must raise their work to its highest power by co-ordinating their labors so that they may as far as possible constitute means proportioned to the task! Sooner or later scholars will recognize the force of this reasoning. Some American university, and perhaps in no very distant future, will seize this opportunity. It will encourage its scholars in the social sciences to resolve themselves into a body of co-operating investigators such as I have sketched. The university which takes this step will at once leap into a position of leadership as unique as that which was occupied by Johns Hopkins University during the fifteen years immediately following its foundation.

More than this, someone, perhaps Mr. Carnegie himself, will presently see that human interests create a demand for investigation of the meaning of human experience on a scale for which we have no present provision. If the income of the Carnegie foundation were to be reserved entirely for research in physical science, and an equal endowment were dedicated to the support of such an institute of social science as I have hinted at, the second foundation would certainly not lag behind the first in justifying its existence by its services. It is due to the provincialism of scholars themselves more than to any other cause that the need of organized investigation in social science has not been recognized, and that the endowment for it has not been secured.

I announce myself as a candidate for a prophet's fame to this extent: Some of my hearers will live to see co-operative research in social science on a scale which will amount to more progress in method and in the value of results than came with Niebuhr's processes of sifting fact from fancy in Roman tradition. If I can do nothing to hasten that event, I may at least put myself on record as having foreseen its approach.

LECTURE VII

THE ANALYTICAL PHASE OF SOCIAL SCIENCE

In the first lecture I said that social science is the proxy of all men in finding out the meaning of life. Science is abortion until its function is complete in action. The final justification for more knowledge of the social process is more ability to carry on the process and to advance it to higher levels.

Not in spite of this estimate, but because of it, I am giving nearly ten times more attention in these lectures to the preparatory stages of social science than to the stage of application. I do so deliberately. In my judgment scholars will do most for the ultimate efficiency of social science if, at present at any rate, they preserve as a rule at least as large a ratio as this between criticism of scientific method and attempts to put such methods as we have into social experiment.

I shall say more on this point in a later lecture. In the sixth lecture I attempted to show how much and how complicated work is involved merely in stating the facts of a brief passage in human experience. But, as though all this necessary description had been accomplished, scholars have talked very freely for over a century of the "laws of history." In the rough they usually mean by the expression formulations of the causal ancestry of everything that is, back to its absolute beginning. When you come to think of it, in connection with the schedule that I presented in the last lecture of the different sorts of things which must be found out before we can even state accurately what occurred in a given case, to say nothing of the causes and effects of what occurred, how many passages do you suppose there are in human experience that have been looked into with anything approaching the thoroughness demanded? If they have not been examined at least as carefully as my illustration has presumed, and if facts enough have not been found in the case of each passage of experience to answer the kind of questions that I have proposed, how do we really know whether the causal ancestry of anything has been made out? Still more, how do we know general principles of cause and effect? If we are not sure just what occurred in one case, nor of precisely why it occurred, nor of the exact consequences of what occurred, it is the limit of four-flushing, if I may be allowed the expression, to assert that we know just what occurred, and why, and with what result, in the hundreds or thousands or millions of cases that would be required to indicate a general law. The historians know this better than anyone else, and they have become more suspicious than anyone else—too suspicious as I shall argue presently—about the whole notion of "laws" of human experience.

In the case of a great many combinations of chemical elements we know what regularly occurs, because these combinations have actually been observed under identical conditions a great many times; and the consequences have been uniform for each combination. The statement of these consequences for a given combination of elements and conditions is a chemical law. We have accordingly a collection of chemical laws. They exactly sum up recorded experiences.

As a result of similar observations and experiments we have physical laws; that is, formulas of the actions of masses of matter, or of mechanical forces, under defined conditions. These laws too are summaries of a great many repetitions of the same phenomena. Men have ascertained just what took place. They have expressed what occurred in each of those cases in a statement which is as true for each as for any single one.

Now are you sure that social occurrences have ever been analyzed so thoroughly that we have the means of knowing just what took place in a single passage of human experience? If you think we have some instances of such precise knowledge, are you sure that we have also such precise knowledge of the conditions under which a given passage of social experience occurred that we may pronounce it identical with the conditions under which another passage of experience occurred and accordingly may state each and all in a form analogous with a chemical equation? Well, if you think we have such similar specimens of human experience, how many of them do you think it would take to make up a "law" of human experience, and do you think we have that many?

For instance, many people have tried to study out a general theory of the causes of revolutions. In how many distinct cases do you suppose the exact causes of a single revolution have been determined beyond a reasonable doubt? We have somewhat elaborate treatises on numerous revolutions, from the Semitic revolt in Egypt down to the socialistic riots in Spain. Are you sure that we know the precise combinations of forces that produced a single one of them?

One of my colleagues in the history department told me the other day that he was getting more and more skeptical as to whether we have the correct clue to the revolt of the colonies against Great Britain. Yet we have been given to understand from childhood that the reasons for that affair were known beyond all doubt!

Again the precise collision of forces which culminated in the war between the states is still a matter of debate. We say "slavery"; we say "state sovereignty"; we say "the tariff." Unquestionably men clashed because their purposes ran counter to one another with reference to these subjects; but there were millions of men in both sections who had much more intimate concerns than any share they had in all these three questions put together. Is it very plausible, when we stop to consider it, that such remote matters as slavery, and the tariff, and state sovereignty accounted in any precise way for the actions of the great numbers of men who left their families and their shops and their professions, and voluntarily faced hardships and hunger and death instead of pursuing the even tenor of their way? Are not these generalizations rather obvious covers for evasion of the problem? Would it not be truer to say something like this: The resultants of Americans' actions on such disputed questions as federal versus state authority, the fixing of tariffs, the holding of slaves, and many less conspicuous matters, took such directions that extraordinary emotions were stimulated in people who had relatively tenuous relations to these interests. Many men thought, felt, and willed in unusual ways; their previous habits and institutions ceased to be sufficient to control their actions within the customary peaceful bounds; they found no means of adjusting these clashing impulses except force; but the precise process of this general mental derangement and the selection of means for reorganizing it are more than we have been able to make out. Would not this really be making a clean breast of the superficiality of our ostensible explanation? Do you think we have such an accurate explanation of the conflict of impulses in American minds before the Civil War that we could take this knowledge to Spain or to Turkey or to Russia or to China and compare it with someone's knowledge of the influences working there, and as a result of the comparison could say with authority, You will or you will not have a civil war?

If you do, I do not share your belief. But incredulity on this matter has gone much farther than mine. It has set a fashion, first of all among historians themselves, especially in the last generation, of adopting a tone of superiority to the whole notion of historical laws. I have heard historians publicly deny that there is any way of explaining historical occurrences. It seems to me that the one extreme is quite as premature as the other.

We cannot explain experience, and we always must explain experience.

Having said so much in the sixth lecture about the first step in preparation for the necessary work of describing the facts within a given area of experience, and having now hinted at the problems of explanation necessarily following hard upon the descriptive phase of social science, I must go back a step for a few general reflections upon this historical process.

If you put together the titles of the four lectures of which this is the second, you will have the chief methodological divisions of the process of science, and particularly of social science as a whole. I have assigned a lecture to each division, or to speak more precisely to each chief phase of the scientific process. I have called these the *descriptive,* the *analytical,* the *evaluative*, and the *constructive* phases.

I need hardly remark that a reduction of all the phases of social science to four calls for the qualification that each of these phases is indescribably complex. In fact, starting with the simplest act of attention and following on grade by grade till knowledge reaches the most general form of science, each of these phases not only passes through ascending degrees of complexity, but at the same time each phase must be incessantly connected with each other phase, while all are passing through progressing stages of complexity. In general these four phases of science are primarily concerned: first, the descriptive, with the *facts;* second, the analytic, with the *connections* of facts; third, the evaluative, with the *worth* of the facts; fourth, the constructive, with *control* of the facts. The first two of these phases are historical in their perspective. The first sets in order past situations. This is the case even when we are dealing with situations which we call present; for to our minds everything even of the day and hour has to be reckoned as past when we describe it, although as I have to observe in a moment there is another sense in which we treat even the remotest past as present.

If this descriptive phase of science occurred in isolation, as any verbal representation seems to imply, its function would consist in displaying facts as such, then other facts as such, at most representing them as existing side by side but not allowing any relation of cause and effect to appear. In other words, the descriptive phase would be photographic, not rational.

For instance, if the experience to be described were the American Revolution, the description would be panoramic solely, depicting the procession of all the events which could be sketched by portrayers or surveyed by onlookers without introducing any explanation whatever.

We make use of this phase of knowledge in one of the most primary forms in the stories of adventure, in the lives of heroes, in the accounts of battles, and of other spectacular occurrences with which we introduce children to history. But in a different way the most critical history attempts to make this phase of science a distinct division of its procedure, if not indeed its whole procedure. From Niebuhr until now in Germany, with Ranke as the busiest preceptor, the most constant refrain among the historians has been the motto, or the commandment, "What was, as it was" (*Was war, wie es war*).

You do not need me to tell you that this separation of what was as it was from why it was has never been and never can be strictly preserved. Indeed I have never been able to tell how strictly the German historians themselves distinguished even in ideal the "as-it-was" from why it was. Mommsen probably succeeded as nearly as anybody. He ventured the fewest possible suppositions about causes in addition to his literal narration of facts. This is the reason why he is a historian's historian, while by contrast Ferrero today is the general public's historian. Mommsen writes only what he knows, Ferrero would have little reason to write at all if he wrote only what he knew in addition to what other historians already knew. He gets a vocation by costuming his conjectures on the stage of the previously ascertained.

Yet it is utterly impossible to separate the facts of history from real or imagined reasons to account for them. We have never respected the privacy even of the Sphinx and the pyramids. We have always been been prying into their story. We may say of our mind as the old rule-of-thumb physics said of nature: It abhors a vacuum. We cannot tolerate even Sphinx or pyramid isolated from the process that produced it. If no actual medium of occurrences presents itself as the setting of Sphinx or pyramid, our minds inevitably construct a hypothetical background. We cannot tell of Patrick Henry uttering his melodramatic "Give me liberty or give me death" without supplying the episode with a scene and a plot which are really our explanation of the cause of the occurrence.

Moreover, when we explain the occurrence we inevitably in a way take it out of past time, through the process of setting a value on it in the shape of a judgment of the fitness or the unfitness of the means chosen to the end in view, and then of generalizing this judgment as a tool for dealing with similar situations likely to occur in future experience. That is, all the main phases of scientific procedure are involved in some lesser degree in any description, just as an act of attention is at the same time an act of feeling and volition.

The same is true in turn of the other phases. Analysis of the causes of the actions of the American colonies from 1774 or 1789 implies and involves not only previous description of their actions, but also some valuation of them as political wisdom or unwisdom, and some consideration of them as possible patterns for future actions or as danger signals indicating actions to be avoided.

Most important of all for the final uses of science, the constructive application of knowledge gets its entire sanction, so far as it can be sanctioned in advance, from the validity of the previous descriptive, analytical, and evaluative stages of knowledge. To the degree in which these elementary processes are assumed without having been exhaustively performed, the constructive programs which presuppose them are gamblings with fate.

As I intimated when speaking of the sentimental sociologists in an earlier lecture, the present form of sociological theory is an evolution through a stage of homely social science which made attempts to construct, without adequate previous attempts to understand the forces to be controlled in the construction.

I have thus been obliged both to turn back on my tracks and at the same time to get ahead of my story. This is because of the perverse fact that these knowledge processes do not follow one another in a straight line like the days of the week. They are more like the shuttles in a loom. All of them have to be in mind at once if we are to understand what is going on; yet we have to get acquainted with them by speaking of them as though they existed separately and consecutively.

These reflections should help us now in returning to the paradox, *We cannot explain experience, and we always must explain experience.*

What meaning can we put into the paradox?

To begin with we probably have here, as is usually the case with such contradictions, a mistaken identity of ideas covered by the same words. Are the believers and the disbelievers in historical laws talking about the same thing when they accept and reject the notion "explain"? I think not.

Do we or do we not "explain" a Frenchman's challenge to a duel when we state that another Frenchman has called him a liar? Do we or do we not "explain" England's laying down two battleships by discovering that just previously Germany had laid down one?

If we mean by "explain" a discovering of relations which would act automatically in the same way among other men, we certainly cannot explain. We may infer rather confidently from our previous knowledge of Frenchmen what one of them of a certain social class will do if he is called a liar. From previous knowledge of Chinamen and Americans of a corresponding social grade we know that in their case the same provocation would be followed by different action. We know enough about Englishmen to be tolerably well assured that if the Germans lay down one battleship the English will lay down two; but at the same time we are equally safe in concluding that if Sweden or Norway or Russia should lay down two battleships under present circumstances neither Spain nor Italy nor the United States would for that reason lay down even one.

That is, we find that certain men act in certain ways under the influence of certain stimuli. We may not be able to go very far toward finding out why these stimuli are followed by the action. We simply know the fact. We do not know why like stimuli in the case of other men produce unlike response. Again we simply know the fact. If we mean by explanation going back of the observed sequels of antecedents to explain why those antecedents are followed by consequences, our ability may be very narrowly limited. On the other hand, if we mean by explanation assorting the variations of circumstances in which men have been known to be placed, and the variations of activities which they have been known to perform under the stimulus of the circumstances, and then if we mean by explanation associating the particular actions of men whom we are studying with all the surrounding circumstances which can be ascertained, and, in so far as there is any known precedent for similar conduct under similar circumstances, inferring that the relation between antecedent and consequent was the same in the two cases, and that the same sequence will probably occur wherever there is the same reaction—if this is what we mean by explanation, then it is altogether probable that men will go on to the end of time becoming more and more explicit in explaining experience.

To approach a translation of my paradox, then, I resort to a plain commonplace, viz.: *Men form valuations, and their conduct is always in the line of one or more valuations, or in a line pointed out by an accommodation of two or more valuations.*

Do not take this as merely a repetition of the formula of the fifth lecture: *Men's experience is the evolution of human values.* We must distinguish between these two concepts "values" and "valuations." The one is objective, the other subjective. Physical prowess, habits of industry, capacity for self-government are *human values.* Estimates of such things, whether before or after the event, appraisals of their worth, are *valuations.* Values are the output of the human process in the shape of achievement organized into personality. Valuations are the power generators that keep the process of achievement in action. Relatively to the last term in the social process which we can understand, valuations are causes; values are effects.

For the benefit of scholars who might insist on a certain technical meaning of the term "valuation," I must explain that I do not use it as a name merely for the conscious process of balancing evidence and arriving at a logical judgment. By "valuations" I mean all sorts of preferences of this for that. They may be congenital. They may be reflexive. They may be sheer habit. They may be deliberate judgments. I am simply going back to the fact that men hold certain things as desirable, certain alternative things as undesirable. I call each of these preferences a "valuation," whether the process of arriving at it was more or less intellectual in the strict sense.

It is the psychologists' affair to go as far as they can, not merely toward making out the differences between the least conscious and the most conscious valuations, but also toward explaining how valuations pass from mere valuations into visible actions. For instance, a tribe holds a valuation of a stretch of land as its hunting-ground, i.e., as the source of its food supply. In this case the valuation of the hunting-ground is as the valuation of the food supply. In the absence of counterbalancing valuations the tribe will resist encroachment upon this hunting-ground. In another age many men form valuations of an anticipated condition after death as more desirable than any comfort in this life.

Their program accordingly becomes renunciation now and hope of a more than compensating hereafter. In another age some men's valuations center upon money and the power that money brings. Thereupon for them everything is worth what it is worth as a money-getter. In each case we have abundant instances of the fact. We know less about the psychological process of the fact.

Accordingly a second commonplace is not so universally accepted, namely: *Human valuations produce all human conduct.*

If I am challenged to tell what the word "produce" means in this connection—and there is a certain propriety in the challenge—I frankly admit that I do not know. That is, I have no solution of the remoter problem implied in the challenge. Again I should go to the psychologists to find out how much they have learned, and what the prospects are of learning more about the subjective process behind the objective sequence. As I use the term "produce" here, however, it has an essentially interrogative force, for the purpose of the inquiry which the challenge calls for, in the same sense in which the phrase "natural selection" is virtually interrogative in a formula of evolution. I explained this sense in the fifth lecture. For instance, I reach the valuation of a certain otherwise meaningless gesture as serviceable for my present purpose. Having this valuation, I use the gesture. I do not fully know the process which intervenes in my consciousness between my arrival at the valuation of the gesture and my use of it; but I know that my valuation came before the gesture, and that the gesture would be unthinkable without the valuation. I do not use the word "produce" as a substitute for knowledge which I do not have of the process between the valuation and the gesture. I use it for the knowledge which I do have, viz., that, in the absence of strong inhibition in the form either of force or of counterbalancing valuations, the gesture will immediately follow the valuation that it will be serviceable.

That is, we cannot give an exhaustive psychological or metaphysical explanation of why there was a servile revolt at Rome and no servile revolt in our southern states. We do know that wherever a population consists of part privileged part unprivileged there are valuations of that arrangement on both sides of it, and these valuations make for corresponding actions. Whatever happens, we are justified in keeping our eye on the fact of men's appraisal of privilege and unprivilege as one of the clues, at any rate, to subsequent events.

We do not know why some men will sell their souls for money and why there is not money enough in the world to buy some other men. Mysterious as either extreme is, it leaves us with the general knowledge that estimates of the value of money are among the variants of men's actions. If two men or two groups of men differ about money, we may safely infer that some part of their subsequent conduct toward each other has its impulse in the estimate at which money is held in their scale of goods. If one group of men has religious beliefs which usually express themselves in certain types of conduct, and another group has beliefs which go along with other types of conduct, we may not be able to pry beyond the existence of these habits, but it would not be worth while to doubt that if these groups have to live together the respective valuations of the peculiar habits will register themselves in corresponding actions and reactions between the groups.

Now it is the veriest platitude among all who have given the slightest thought to human experience that *men who may be of help to one another in gaining ends settle in groups accordingly.* Nobody had thought that this fact would repay very close study till the sociologists took it up. It grew on the sociologists, however, that this phenomenon—the formation of functional groups or valuation groups—deserved much more attention than it had received. When the sociologists win their case, as they will some time unless men stop thinking, it will be another instance of the stone which the builders refused becoming the head of the corner. If the plan of these lectures permitted me to go into such *minutiae,* this would be the point where I should have to show how the problems of explanation or analysis presented by partial description of human experience led to general sociology, and then to social psychology. If I were speaking to sociologists or psychologists particularly, I should have to explain what I understand by this subdivision. For the sake of simplicity I ignore the subdivision and use only the term sociology.

We may know individual valuations and group valuations in the same sense in which we know specific gravity. It does not seem probable that we shall ever be able to measure individual or group valuations as accurately as we can measure the specific gravity of physical bodies. Professor Giddings is working on a "social marking system," and he has developed an apparatus for making some of our measurements of valuations more precise than they have been. It is not too much to expect that more progress is to be made in this direction. Whatever approaches we may make in the future, however, to adequate standards of social weights and measures, it will of course always be true that human valuations are less constant than specific gravity. In the first place, enemies of today are allies tomorrow. Groups that have been militant in their valuations adopt industrial valuations just as individuals as they grow older change their leading valuations from sport to business, and to politics, and to art, and again to other sport, etc. In the second place, as Professor James says, men "energize" differently. In this respect there are contrasts both between persons and persons and between the same person at different times. Ratzenhofer's scale of these energizings was: *positive moderate; comparative radical; superlative irreconcilable.* That is, one of our calculations always has to do with the ratio in a given case of those whose energizing is exhausted by an academic statement of their valuation, those who will work for it, and those who will go to the last ditch for it. The phenomena of panics, of political elections, of religious revivals, with the corresponding reactions, readily come to mind as illustrations of the fluctuating force of valuations.

Discounting then all these elements of inexactness, we still have the most searching clue to analysis and explanation of human experience in ascertainable valuations and their modes of action. We need have no fear, by the way, that the use of this clue will entangle us with the old dialectical puzzle: Does action always follow the strongest motive? That is a quite different problem. The chief sociological contribution to the methodology of social science consists, in a word, in emphasizing the implications of the fact that human valuations are the efficient social forces. These implications may be summed up in a simple proposition: *To explain human experience it is necessary to know human valuations and their workings.*

For lifting this perception above the threshold of consciousness social science owes more to the author of *Dynamic Sociology* than to any other man. I express this judgment in spite of the fact that in my opinion Professor Ward's elaboration of the thesis, *psychic forces are the true causes of all social phenomena,* makes the actual human process much simpler than it really is. Just as the Kantian ethics makes virtue a function of impossibly abstracted will, so Ward's sociology makes the social process a function of impossibly abstracted cognition.[1] This slurs over the processes of attention and valuation too much, not only from the psychological standpoint, but from the sociological as well.

These are details, however, which need not confuse us in making a preliminary survey of the analytical phase of social science.

If I correctly apprehend what men have meant as a rule when they have talked either pro or con about the "laws" of history, the notion has usually been of a way of making out an unbroken causal series by which, for instance, a given act of Congress in the year 1910 may be referred back, step by step from nearer effects to remoter causes, until it begins in some initial cause in Witanagemot or Roman Senate or Amphictionic Council. Even if we believe that there is such a relationship between the present and the past—and I am unable to understand how anyone who professes to hold the evolutionary rather than the creationary conception of experience can suppose anything else—it would be an exceptionally credulous person who could imagine that we might ever in a single instance identify the steps in such a succession. If by explaining human experience such a superhuman piece of detective work is meant, I am acquainted with no one who would contend for the possibility. A proposed "law of history" hypothecated upon alleged knowledge of such a sequence would be less plausible, if anything could be, than those genealogies which people with more money than sense of historic probability pay fakirs to trace back to the Conqueror or to Charlemagne. Such a conception of explaining experience is like asking a biologist to prove that there has been a process of the differentiation of species by tracing back the chemical elements of which his own body is composed through all their mutations to the spot and the state in which they existed when animal life first appeared.

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[1] I am aware that this proposition seems to contradict Ward's theses in terms of feeling. I nevertheless believe that my objection is valid.

But there is a quite different conception of explaining experience. It does not contemplate reconstruction of the items of the life of men from first to last. Its aim is to make out the process of social life, whatever be the particular passage of experience to be explained. In this it is attempting something analogous with the attempt of the physiologist to determine exactly what is going on at a given time in a living organism, whether it is normal or pathological.

The physiologist does not try to find out the cosmic record of each atom in that aggregate of material previous to its entrance into the organism. He tries to find out what the tissues are now doing as parts of the organism.

In the lowest terms that I can find for it without going beyond my depth in psychology, the social process is this: forming valuations; seeking means to realize valuations; in the seeking, whether successful or not, modifying the valuations; again seeking means to realize the changed valuations; and so on beyond any limit that we can imagine. In other words, considered on its process side human experience is an increasingly involved rhythm of choosing ends and choosing means to attain them, the choosers being themselves more or less reconstructed in the process.

Thereupon the problem of explaining human experience in general, or a select passage of it, may be reduced to a pattern question that in form is simple enough: *What was the body of valuations held by the men concerned, and what was the scheme of means on which they relied to realize the valuations?*

That is, our clue to the universal process of the evolution of human values is that the elements of the process are everywhere generically the same. They are always on the one hand men's valuations of things worth doing, and on the other hand men's devices for doing the things. Each of these two elements is functionally of one pattern. Each is merely more complex in apparatus in the British empire for instance than in a Bushman's village.

If you feel moved to criticize to the effect that what I have been saying bears not the faintest trace of novelty; that poets and philosophers from Homer and Plato down have rung the changes on it in countless more attractive ways; that hundreds of American school boys repeat it, and thousands hear it at every graduation season in some variation of the theme "Ideas make the world"—if you think this rejoinder states facts, I shall enter no denial. You are right but you are not pertinent. If all the barren commonplaces abroad in the world should suddenly get the attention they deserve, I know not how many generations of human evolution would be required before men's ideals could so nearly catch up with reality that they could see any room for further improvement. If all our commonplaces were worked to their limit, they would amount to all the heaven we could understand. It is true; the only original thing about the sociologists' statement of this commonplace is that the sociologists seriously propose to follow it up and to find out how efficient a guide it is to explanation of experience. The chief source of all human woes, in our age at least, is that we do not live up to our commonplaces. This is almost as true in science as it is in morals. It is conspicuously true in this instance. Instead of making a venture in mysticism, as has been pretty generally supposed, the sociologists have been literal enough to take the commonplace at its word and to resolve that they will get all the instruction possible from its guidance. The sociologists have assented to everybody's knowledge. "Yes, people do form valuations," say the sociologists; "they do grope after means to realize them; they do arrange themselves in groups in the course of this groping; they do make their groups tools in the service of their valuations; and this is the process that we discover whenever we cast our eyes abroad upon men, whether the nature peoples or our neighbors. Go to, now! We will take knowledge of these valuations and these functionings; we will do it by system; we will do it from one end of the scale of the process to the other; and in this knowledge of groups valuing, and groups functioning in the line of their valuations, and thus transforming themselves through striving to realize their valuations, we will get more insight than has ever before been gained into the meaning of human experience."

A few years ago the head of the department of economics in one of our largest universities volunteered the remark to me: "In my opinion, Professor Thomas has staked out the richest pay-dirt at present under claim anywhere in social science." I was so delighted at this symptom that I took no risk of interrupting the progress of ideas by venturing any leading questions. As Professor Thomas' *Source Book of Social Origins* has since made plain, however, he has simply been working out a more penetrating method than had been used before for getting a concrete content and form for an idea which had been a rather vacant generality. Many less specific analyses, like Professor Eucken's *Ruling Ideas of Ancient Times* or the Duke of Argyle's *Unseen Foundations of Society,* have been almost within striking distance of the same method. Herbert Spencer's rather unfortunately misnomered *Principles of Sociology* had improved the method. In its aim more than its technique Professor Sumner's *Folkways* was an application of the same idea which Professor Thomas is developing. But Sumner and Thomas have merely furnished early samples of the sort of social analysis which was foreshadowed by Comte's prospectus of sociology. General sociology is first of all the elaboration of categories as tools for such analysis, and then it is a beginning of the use of these tools for purposes of social explanation.

In the sixth lecture I supposed, for the sake of illustration, that a body of scholars from all the departments of social science had so far recognized the force of the argument here outlined as to form themselves into an institute for co-operative investigation of human experience. I did not raise the question at all what work they might best undertake, because that would have carried me away from the treatment of principles to a specific application of the principles; and about this opinions might greatly differ. As my subject was the descriptive phase of social science, I further supposed for the sake of more definite illustration that the experience chosen for description was that of Frenchmen during the forty years following the accession of Louis XVI. I have been told meanwhile that I was understood to imply that it would make no difference what passage of experience such an institute chose to investigate; that one would be as important as another; or else that in my opinion the French Revolution was the most important portion of human experience for scholars to study. I take this opportunity to correct that impression. It would be utter and inexcusable waste of opportunity for such an institute to put its force upon some parts of human experience. On the other hand, there may be a great many reasons why such an institute would not be making the best use of its strength even if it chose to study such an intensely instructive period as that of the French Revolution. I hope this statement will make it clear that when I am using purely hypothetical illustrations I am not laying down rules of procedure.

I feel bound under the circumstances to repeat the same precautionary statement in connection with the illustration which follows. It may be conceivable to some minds that our institute of social science might devote its earliest years to the perfecting of the sociological categories of description. I do not mean to imply anything one way or another about the wisdom of such a decision. Without asking you to overtax your imagination by assuming such a choice on the part of the institute, I merely say that progress in explaining human experience will very nearly keep step with progress in making out valuation groups in their ascending orders of complexity and the functionings which take place in and between those groups, as their valuations and their machineries for realizing them assume varied characters. Someone must do the work of analyzing human situation after situation in terms of valuations and of energizings in pursuance of the valuations; otherwise social science will come to a halt at the point where its chief efficiency should begin.

It is in this connection that pioneerings such as those of Sumner and Thomas are significant. They have relations to social science as a whole closely resembling those of Professor Loeb's studies of micro-organisms to human physiology. The folk psychology of the nature peoples is merely the child psychology of the race. It is study of the universal processes of evaluating and energizing in the most rudimentary forms in which they may be found. This rudimentary knowledge is our initial guide in analyzing the maturest forms of the same processes which we anywhere encounter.

But there are ascending orders of complexity in group psychology, just as there are in the zoölogical series. We have the task therefore of analyzing the successive species of social types from the least complex to the most complex. The reason is not merely that we can learn in this way only the actual processes of the highest present social group, but also that the intermediate types recur within the great societies of our own civilization.

Preparation for research in social science is therefore in a sense analogous with preparation for the practice of medicine. At one stage the sort of experience necessary is comparable with the study of elementary biology. At another stage description of relatively simple ancient groups is in order, which may be compared with dissection of the cadaver. Still later one is able to profit by analysis of social experience in recent times in situations quite closely resembling those of the present. This may be likened to attending a clinic. Then comes the actual learning by joining in current affairs, which is like the work of an interne. Latest of all and analogous with medical practice itself, there may be responsible attempts to control the conditions of social health and disease.

That is, our conception of social explanation does not make it like attempting to account for the last child born in terms of all his progenitors back to primordial protoplasm. We think of it rather as like trying to express the child in terms of all that we have learned about physiological processes in general—the organizing of cells into tissues, and tissues into organs, and organs into functions, and functions into growth, and growth into power. Thus the men who are beginning to get a "body" for sociology, as Professor Ross expresses it, are really furnishing sample analyses of selected social groups; and similar and more complex analyses must be made of every social group so far as we undertake to explain its experience at all. How rapidly it will be possible to make such attempts convincing no one can foresee. Noteworthy efforts at such explanation are the studies of Mr. Louis Wallis on the experience of the Hebrew nation, published in the fourteenth volume of the *American Jourual of Sociology* under the title, "Biblical Sociology"; a study of a typical modern situation by Professor Williams, reported in the *American Journal of Sociology* for May, 1910, under the title, "Outline of a Theory of Social Motives." If one wants an incisive criticism of the process involved in arriving at such valuations, Dr. Arthur F. Bentley's book entitled *The Process of Government* should be read. In spite of the fact that the book laboriously misunderstands all the sociologists, it would repay much more attention than it has received.

Anyone looking for a leading-string through the whole maze of sociological technicalities may find it in what I have said in this lecture, provided one is prepared to make the application. Like the biologists and the electrical engineers we have seemed to the onlooker to have been more successful in producing vocabularies that called for the remaking of dictionaries than in really enlarging knowledge. In fact our work is not for the words but the words for the work. We have to differentiate terms of structure and function and process, to go along with our increasing insight into the differentiating phenomena of structure and function and process in men's experience. It may be that our present apparatus of concepts and words for them will look as insufficient to men a hundred years hence as eighteenth-century physical and physiological terms now look to us.

Meanwhile this is the actual frontier of social science today: We have the clue that men valuing and combining their efforts in the line of their valuations are the elements of all social experience. We have to learn how to recognize men's valuings and to state their actions in terms of them, from the most simple to the most involved. We have to learn all we can about the functionings in the most primary human groups which we can trace, in which all the visible valuations may possibly be reduced to the food and sex wants; and we have to expand that knowledge to correspond with each lengthening of the gamut of men's valuations and devices.

The phases of the scientific process to be discussed in the next two lectures are so intimately interwoven with this analytic phase that I must anticipate something which will have to be repeated, namely: All that we can do in the way of explaining past experience has its chief value in fitting us for description and analysis of the passing situation, and then for shaping scientific conclusions so that they will most effectively pass into promotion of the present human processes. While I am obliged to discuss these abstracted phases of science as though they had a detachable existence and an independent and co-ordinate value, this is not the fact. Each of these phases is worth what it is worth as a means to the whole process of science; and science itself is worth merely what it is worth as a means to the end of completer human experience. Our whole scientific methodology must at last be adjusted to this outlook. Our knowledge processes must be organized with reference to the scale of values of things to be known. The standard of that scale will be the sort of knowledge demanded by the things to do.

LECTURE VIII

THE EVALUATING PHASE OF SOCIAL SCIENCE

One of the darling dogmas of modern scientific purism is that in dealing with facts judgments of the values of the facts must be strangled. It would be hard to find a very clear case of strict obedience to the dogma, yet it stands high in the formal scientific code. Of course it is the opposite swing of the thought pendulum from the method of conscienceless homiletical impressment of snap judgments about facts into the service of opinion. One cannot draw accurate boundaries for such tendencies in a sentence, but it is within limits to say that this "edifying" way of treating supposed facts, to the prejudice of valid description and analysis, was the rule rather than the exception in the eighteenth century. The coming of criticism to its own in the nineteenth century might be described with some approach to fairness as an inversion of the order of prominence previously assigned to description on the one hand and to evaluation on the other. The older method went so far that it permitted valuations to create their own facts. The reaction went so far that it invaded the right of facts to be evaluated.

The historical criticism which by somewhat general consent is dated from Niebuhr is in principle a repudiation of previous prescriptive right of opinion to create its own evidence. This criticism did not at once go to the other extreme of excluding evaluation from the scientific process. It served notice that the evaluating process might no longer be allowed to settle the facts and their meanings in advance. It demanded the right of way for description and analysis. The facts and their connections having been determined, then the new criticism not merely admitted the right of evaluation but insisted upon the exercise of the right; otherwise there would have been no sufficient reason for the pursuit of knowledge at all.

I presume that I have said enough in the last two lectures on the general principle that the four main phases of the scientific process which I have distinguished are all necessarily involved, in some form and degree, in every actual scientific process. I am now concerned therefore to indicate some of the important marks of this third phase of the process—not necessarily third in time, not necessarily third in rank in a given problem, but third in that order of precedence which we call "logical" when we attempt to represent experience in words.

When a human device loses any part of its character as a tool, and takes on any of the character of a ritual, it begins to be tyrannical. Each increase in the ratio of the ritualistic to the functional in the use of the device threatens the genuineness of the process. If time allowed, I should be glad to present evidence in support of the proposition that throughout social science we have permitted the descriptive and analytic phases of critical method to become ritualistic in their force to such an extent that they seriously prejudice the right of the evaluative and the constructive phases of science.

In all departments of knowledge, and specifically in those reaches of knowledge with which we are now dealing, men assume that their odors are those of superior sanctity when they declare, "You have no business to have opinions about facts; all you have a right to is the facts themselves, and there an end of it!"

If we had time to amuse ourselves at the expense of this pomposity, it would be easy to show that it is thoroughly "Pickwickian."

Of course everybody with the rudiments of psychology knows that evaluation has its part in the earliest processes of attention, and is necessarily concerned in more and more complex forms in the successive stages of knowledge. The very judgment which expresses itself in the form of a prohibition of evaluation is itself an evaluation!

To introduce the real problem in this connection, then, I again resort to paradox, viz., *We may never put our valuations into the facts, and we must always put our valuations into the facts.*

Now how near can we get to the truth that is pointed at from opposite directions by this contradiction?

I had intended to analyze the two sides of this formal antithesis in detail. So much needs to be said about the substantial matter, however, that I have time merely to indicate the result at which analysis would arrive, namely: Our evaluations are always pertinent to the extent of their justification and use as hypotheses for explaining and applying the facts. Our evaluations are impertinent to the extent in which they embarrass criticism of the facts and of their functional relations.

I shall not return to this abstract statement in the rest of the lecture, but I shall try to bring out some of its practical consequences.

To begin with, I would call attention to certain educative values in study of human experience earlier than that of living men. I am not saying that these are the only values. No opinions which may be held by others about additional uses of such study are either accepted or rejected by implication in what I am now saying.

If we had the training of all the future legislators, administrators, judges, and leaders of public opinion in our country completely under our control, we should all want them to study the past of the human race to some extent. Some of us would want to prescribe more of such study, some less. We should state our reasons for such study somewhat differently, but each of us would have one or more reasons that in our minds would be sufficient.

The main reason which I would urge for such study, from the side of the human process in general, not from the standpoint of the individual, would be closely connected with my idea of the functional relation between the evaluative and the constructive phases of knowledge on the one hand, and the two phases already discussed on the other. It would be connected also with the idea which I outlined in the seventh lecture, of the analysis of *process* as contrasted with the tracing of chronological sequence. It would differ rather sharply with the common conception of the sort of knowledge to be derived from history. *In a word, I should rely upon academic study of the past less to yield inductions of the* *common qualities of similar occurrences, past and present, or of the causal relations between historical events; I should expect it more to develop an eye for all the different kinds of factors involved in contemporary social processes, and a keen sense of proportion to gauge the ratio of influence between the factors.*

For instance, it would seem to me very paltry, even if it were possible, to learn all the facts and even to analyze and proportionally estimate the different sorts of influences that led to the facts which come to our minds with the mention of Brutus and Charlotte Corday and J. Wilkes Booth and the rest of their series. We may assume for certain purposes that we have all the facts and that we have accounted for all the facts that preceded one or many of these tragedies. When we attempt to put these facts and our analysis of them into one of the conventional specimens of historical generalization, the irrelevance of the induction for all purposes of precision is so obvious that the skepticism not only of trained historians but of intelligent laymen is unavoidable. When we say, Such and such conditions produce political assassination, we utter a generality not much more dependable than the generality that going to bed precedes the majority of deaths.

Presupposing the descriptive and analytical phases of our knowledge process, however, and putting the emphasis now on the evaluative phase in one of the cases referred to, such questions as these arise: The valuations or purposes of the society concerned being taken for granted, and the facts about the given situation being adequately described, how many kinds of action might have been useful in that situation toward accomplishing the purposes? Suppose we have some means of knowing that the valuations actually held by the society in question were mistaken, that they tended toward the marring rather than the making of the society; what alternatives were within reach of the society for modifying the valuations? In either case, was this particular recourse of political assassination the most promising means in sight? What means would have been a better investment for the society?

I express no opinion about the grade of social education which would be represented by applying the mind to such questions, nor about the proportion of such exercise which would be advisable in the course of education for social leadership. I simply say that a certain amount of this sort of inquiry would be profitable for everyone who is to bear the part of an educated man in helping to solve problems of real life.

But the attempt to answer one of these questions is an attempt to arrive at an evaluation of the particular act under review. Notice I have asked no questions about the motives of the actor, about the merit or demerit of his act as a question of his individual virtue, about the praise or blame that should be meted out to him, about his responsibility or his irresponsibility for what he did. There is a scientific priggishness which is altogether too fussy about barring even these questions. As hypothetical problems, assuming a formulation of the surrounding circumstances, they have a certain pedagogical use, in the same way to be sure that profitable hypothetical problems in the theory of morals are presented by Hamlet, or Lear's daughters, or Othello.

But I am not talking about this second type of question. I am making use of the fact that we treat passages of experience like those taken for illustration in a purely arbitrary way, if we are content to deal with them merely as effects. In these effects the causes which produced them continue their work. These remoter causes take these effects into partnership as cumulative or varying causes. Thus reinforced the antecedent causes enter anew into competition with the other causes that are working for results in the same society. Now I am urging that it is profitable, as a part of our apprenticeship in knowledge, to practice evaluating the forces which were available at different stages of experience, which men might have controlled in different ways, which might have been turned into causes of different effects. We thus have a means of learning how to foresee various possible effects, and to form valuations accordingly of alternative means between which there is room for choice.

In other words, there are two opposite ways of looking at past occurrences. The first way is to stand in front of them so to speak, to see them coming toward us, to make out the different forces that are impelling them, the share of each force in the impulsion, and to regard the occurrences as so many resultants of all this previous interaction. That is well as far as it goes, but it is attention to only one aspect of the occurrences.

The other way is to put ourselves around behind an experience as it were, to look forward along the line of its action as a cause, and not only that, but to take account of the inhibited causes which might have been released for action instead of the one really employed, and to form valuations of the relative utility of the means really chosen and those set aside—the actual purposes of the society concerned being taken as the criterion.

I repeat that I am speaking of the academic values of these two attitudes of mind. The reference is for the sake of illustrating what I mean by the evaluative phase of science in distinction from the other phases. I say it would be wasteful pedagogy to confine our views of occurrences to their relations as effects, and not to employ our minds also upon estimates of the comparative value of those occurrences, and others which were possible alternatives, considered as means for promoting the contemporary purposes of the given society.

The illustration might perhaps be more vivid if stated in terms of a different sort of occurrence. Suppose the experience in hand is the Declaration of Independence, the Ordinance of Secession, or the Reconstruction Acts. In either case it is impossible for us to end our scientific treatment with the aspects of the process discussed in the last two lectures. No passage in human experience is a closed incident. Every last act in the human drama is a curtain raiser for another first act. Suppose we have exhausted description and interpretation of either of these American experiences up to its realization as an effect. The human process does not stop at such flag-stations of our minds. Science would deserve all the contempt which the least appreciative rule-of-thumb man aims at it, if science limited itself to the rôle of a dissector of dead deeds or a necrologist of dead men. Science is at last a part of the dynamic and directorate of events. As apprenticeship for the sort of science which completes itself in action, academic dealing with past human experiences would be pitifully ineffective if it stopped with consideration of men's acts as past and done. Even academically we may place ourselves in the position of the actors. We may look forward from their standpoint into their problems. We may take account of their resources. We may balance their appraisals of probabilities. We may agree or disagree with them in their evaluations of possible alternatives. This latter procedure, I say, is a profitable element in educational experience.

Be this as it may, I have used the long illustration simply for the purpose of bringing out the difference between the descriptive and the analytical or explanatory phases of science on the one hand and the evaluative phase on the other. I have not raised the question of the amount of this evaluative procedure actually needed in our academic program. I have not intended to imply that there is agreement either within or without academic circles about the pedagogical utility of this evaluative process when performed upon past situations. However the case may stand in these respects; my central interest at this point is in bringing into view the distinctive traits of that aspect of science to which this lecture is devoted.

Dropping the illustration altogether then, so far as it may seem to imply a return to pedagogical considerations instead of continuing attention to research, I would resume direct discussion first by stating as clearly as I can what I mean by "the evaluating phase of science" at this point.

I mean the work of arriving at the completest objective estimate possible of the qualitative and quantitative effects which possible alternative combinations of the forces to be controlled in a given situation would have upon the whole human process.

In other words, it is the supremest effort of which co-operative science is capable to make ascertained knowledge of cause and effect in human relations, rather than individual or partisan preferences about human relations, the standard of value by which to arrive at decisions of what ought to be in human programs. As I shall remark later, the use of such a criterion necessarily depends always upon provisional evaluations of this as preferable to that throughout the whole range of supposable effects of alternative programs.

In the second place I must call attention to the fact that when this evaluative phase of science is foremost, whatever its subject-matter and whatever its importance, its time-consciousness is set with reference to the present and the future instead of the past.

I presume it would be possible to make an argument to the effect that no study of the past could do anything whatever toward qualifying anybody to evaluate forces to be controlled at present. It is conceivable that some men might go to the extreme of believing that the daily business of life, the school of actual experiment with affairs, is the only educator that can make anyone in any degree competent to pass on the value of courses of action open, or which men might be induced to open, at this moment. Fatuous as that idea seems to me to be, I will not contend against it. Let anyone assume if he will that all study of the past goes for nothing in equipping men to deal with problems of the day. The fact remains that when the world wakes up to each day's work, and in each minute of its working hours, real life is a constant evaluation of physical and human forces. Every man who is dealing with reality is incessantly obliged, whether he will or no, to assume estimates of the relative values of different possible means with reference to the ends which he has in view. In so far then as there can be any science at all of human life considered as an enterprise, not as a reminiscence, this evaluative aspect of the science is central.

In their aims, as formulated usually by their respective exponents, political science, political economy, and sociology are evaluative procedures of so many distinct kinds. Their outlook is prospective rather than retrospective. Each attempts to find out how to bring something to pass. In general, political science tries to find out *the best methods of legal control;* political economy, *the best means of assuring material prosperity;* sociology, *the best means of promoting the development of human personality.*

In my judgment the institute of social science spoken of in earlier lectures would have little use for those academic categories after it had settled down to serious work; but I may take these familiar names for granted a moment for purposes of illustration. I am not about to say anything that is debatable. I need merely to emphasize something about which there is no controversy. It is so obvious that it is seldom thought worthy of attention, namely: From Machiavelli to Mr. Bryce the political scientists propose some variation of the one question, "How may government most successfully govern?" In proposing this question the political scientists evidently assume successful political control as an end, and their whole effort thereupon becomes a process of seeking and evaluating possible means to that end. The process rejects many conceivable means as less available for various reasons, and approves certain schemes of means as more likely to promote the end.

The political economists do a parallel thing with their proposed end wealth, and the means by which it may be gained; and the sociologists another parallel thing with their proposed end human values, and the best means of achieving them.

But is scientific evaluation complete on this level?

> Are all [*its*] conquests, glories, triumphs, spoils,
> Shrunk to this little measure?

Is it one and the same thing whether the sort of government which Machiavelli had in mind achieves its ends, or the kind of government proposed by Mr. Bryce? Is the getting of predatory wealth as high in the scale of ends as the getting of social wealth? Does it make any difference whether the "human values" which we propose as our ends are the values of the market, or of the jockey club, or of the officers' mess, or of the academy, or of the cloister, or of neither? In other words, beyond evaluation with reference to the ends proposed by our political science, our economics, our sociology, is there such a thing as evaluating political science, economics, sociology themselves? May science, or rather must science control their determination of ends? Must science ask for the sanction of those ends? Must science examine their passports? Must science call for the authority by which they rank as ends?

So long as we beg the whole question by assuming the finality and inviolability of those abstract constructions, "political science," "economics," "sociology," our so-called social sciences will run into so many blind alleys. The saving clause in the situation is that the walls of these pockets are slightly porous.

The moment we propose a vital question, with the purpose of turning upon it all the knowledge processes we control, the unreality of these segregated "sciences" is evident.

For instance, suppose we face the problem: *Is the increase of capitalized wealth or the in-*

crease of per capita consumption more to be desired in the United States today?

Or suppose we approach the same problem from this angle: *Should a tendency toward centralization of the control of capital or toward decentralization be encouraged in the United States today?*

Abstract as the problem appears in this question it is not an academic problem. It is the very sort of real problem before which our raw academic sciences either resort to debating-society generalities, or they balk and shy into easier paths and thus confess judgment of incapacity. Yet fires are smoldering at Bethlehem, at Pittsburgh, at Chicago, which at any moment may kindle these very problems into a national conflagration.

Suppose our institute of social science resolved to struggle with the problem. It would necessarily first reckon with the preparatory stages of the scientific process discussed in the last two lectures. It would be obliged to make out a provisional conspectus of the people of the United States in their present situation thought of as a complex of achieved values combined in a momentary status. I have proposed a scheme for such an exhibit in the fiftieth chapter of *General Sociology*. The proposal is crude enough in all conscience, and I would be the first to welcome a better one; but nobody to my knowledge has submitted a substitute in competition.

The institute would be obliged, in the second place, to make out a qualitative and a quantitative analysis of the valuations at present held by the people of the United States, and to trace the isothermal lines of their distribution.

Assuming that some fairly reliable preliminary survey of these contents of our present life had been made, a starting-point for this particular phase of the task of national self-knowledge would have to be determined.

The alternative phrasings of the one problem having been reconsidered, the question would at once present itself, "desired" by whom? or "encouraged" by whom?

Here our institute would be face to face with a concrete particular under the universal problem of evaluation. The generalized question is: *What is the ultimate criterion of human valuation?* Some subspecies of this question is involved at every point in the scale of human relations, from the upper level of epistemology and general ethics down to the plane of individual choices in the daily routine.

Our institute could perform no more timely service than the work waiting to be done at this point. There is more available insight into the criteria of moral valuation than there was when Kant wrote; more than when Jeremy Bentham wrote; more than when John Stuart Mill and Herbert Spencer wrote. That insight has not yet been focalized, however, in a way which appeals to many men as more demonstrative than moral perceptions of a generation ago. To express the situation in a different figure, there is material in solution in the thinking of all social scientists today sufficient to form the nucleus of a moral philosophy quite as distinct and a thousand times more capacious than any of the great historical schools of morals. This material has not been precipitated in a form that arrests concerted attention.

Nothing could as surely promote the formulation of the knowledge at our command in a way which would win the widest assent, as co-operation of the different types of men that our institute would contain. Each would call for his own sort of expansion of the multiple standard of value which today's insight tends to construct; and the concurrent appeal to a composite standard would crystallize judgments which are now fluid about the criteria of social values which must be accepted as the best at human command.

Every historical attempt to answer the question: "By what standard should we measure desirabilities?" has sooner or later made the mistake of setting up a criterion which was in effect a limitation rather than a test. The hedonist's "pleasure"; the perfectionist's "virtue"; the utilitarian's "happiness," each in its way met this fate. Functioning at first as a guide toward moral valuation, each ended by blocking the way toward thoroughly vital judgments of moral values. Our minds play tricks upon themselves with every verbal symbol of finality which they employ as a measure of conduct. Whenever we strain after a supreme verbal expression of the criterion of human actions it always turns out that we have merely delivered ourselves over to another device for setting bounds to our apprehension of moral values. Whether we express our uttermost imaginings of desirability in some variation of the religious conception "accomplishment of the divine purpose," or in some variation of the philosophical conception *summum bonum,* the content which we associate with the phrase is always somebody's assemblage and construction of particular valuations. Our phrases for criteria of moral valuations always amount therefore in application to requisitions that conduct to be approved must conform to a predetermined structural scheme, just as a block of stone is building material or waste according as the shape and size in which it has been hewn fit it or not for a designated spot shown in the architect's specifications.

The innumerable experiences of this result furnish a certain backing to the men who flout every effort to simplify and standardize moral valuations. These resistances come from all quarters of the compass. They represent on the one hand radically unsocial tendencies. The interest of men thus actuated is of course in impeaching all moral standards except that one which leaves them free to pursue their own individualistic programs. On the other hand, these resistances come from men who have not yet fully learned the lesson of the failure of all categorical systems of morals. These men do not intentionally oppose the installation of a more effective moral criterion. They earnestly long for it; but in spite of the lessons of the past they persist in demanding another foredoomed "final" criterion or nothing. If we cannot propose a standard of conduct which is verbally impregnable, these men are unable to see that a less absolute criterion is worth anything at all. Yet the test proposed may be mentally and morally so stimulating and enlightening that its dynamic force far more than compensates for its logical fallibility.

An absolute standard of anything, for limited minds, is a chimera. Since Sir William Hamilton we have no excuse for dubiousness about the conclusion that finite beings can never be manipulators of "the absolute" except in their hallucinations. Standards of human conduct which would correspond with the nebulous patterns inviting our imaginations when we demand infallible categories of moral judgment would be monuments marking termini. Men have no business with termini. We are in the midst of a career whose orbit, so far as we know, is parabolic. Our task is to determine the path of our orbit as far ahead as we can calculate it, not to plot moral topography at infinity.

I have deliberately made this excursus into ranges of philosophy far outside of social science. I have done it for a specific and practical reason. At the risk of writing myself down as "easy" I will assume that no one who has given serious thought to social science is in the former class of objectors to the systematizing of moral evaluation. On the other hand, during twenty-nine years of teaching college seniors and graduates I have never been entirely out of touch with one or more students, not to mention many older men, who represented the second type of reaction. They were halted in the ethical phases of their sociological thinking because no infallible criterion of social action could be proposed.

I have gone out of my way to recognize this difficulty. I do not want anyone to think I am unaware of the implications and the responsibilities involved in attempting to evaluate human conduct. On the other hand, I want it to be known that for the last twenty years I have been balancing what I am about to say against the weightiest arguments I could find in the literature of categorical moral philosophy. I may be wrong, but if there is anything in other types of ethical theory to convict me of error I have failed to find it after years of search; and the more I have hunted after such correction the less persuasive all the dialectic and speculative arguments have appeared.

Let us return then to our sample question with its two profiles, namely:

First, *Is increase of capitalized wealth or of per capita consumption more to be desired in the United States today?* Second, *Should a tendency toward centralization of the control of capital or toward decentralization be encouraged in the United States today?*

I will squarely face the matter-of-fact question which, if pressed to its last implications, punctures all the categorical criteria that philosophy has ever proposed; namely, "desired" by whom? "encouraged" by whom? Without a blush I return the shamelessly homespun answer, *Desired and encouraged by the consensus of our institute of social science!*

Could anything be more banal! Could anything more ignorantly trifle with the final problem of moral philosophy! Could there be a weaker attempt to cover failure by impudence!

In full posssession of my senses I have invited this retort, and I am prepared to stand or fall by my answer. What I mean is this: The whole series of proposed philosophical "ultimates" of moral judgment—"happiness," "perfection," "rectitude," "the greatest good of the greatest number," and their variations—have turned out to be essentially like the principal schedules in an American tariff. They have been written by their friends for the benefit of their friends. When we have allowed the clergy to prescribe the moral code for the laity, we have had a clerical cast of life. When we have allowed rulers to prescribe the moral code for subjects, we have had a rulers' régime. When we have allowed masters to prescribe the moral code for workmen, we have had a masters' society. In the same way, when we have allowed abstract philosophers to construe ultimate criteria of moral values, those criteria have contained just the degree and kind of wisdom which their makers could put into them, and no more. They were defective with the defects of their authors' knowledge, and vision, and judgment. The moment wider knowledge, larger vision, juster judgment have dictated our moral valuations, the categories have proved to possess just the authority of their authors' grasp of the situation, no more.

In other words, all our paraphernalia of pretentious philosophical formulations of moral criteria represent simply this state of things: *So far as the persons who made or who hold the respective formulas are able to judge, those formulas stand for the actual scale of moral goods.*

That is, standards of human action are always at most merely digests of the best human wisdom that can be brought into judgment upon the action. It may or may not always be convenient to adopt single words or phrases in recapitulation of this fact; words or phrases which visualize or epitomize as well as possible the criteria or the specific judgments which follow from the use of the criteria. Whether we adopt such devices or not, the truth remains that the devices have no more and no less validity than the tenability of the supposed knowledge, and the inferences from the knowledge which the users of the standard compose into and extract from their respective formulas.

What I said then amounts to this: What always has been in fact let us now candidly declare, viz., *The last available measure of desirability in human affairs is the best wisdom of men that can be applied in judgment of the affairs.*

To reword my first answer a little more accurately: *In so far as an approximation to reliable evaluation of conduct may be looked for at all from academic sources, not formulas of individual theorists, or of types of theorists, but decisions rendered by such a composite council as we have supposed, would be the most enlightened appraisal of moral values that science can reach.*

The school of moral philosophy in which Adam Smith was both pupil and teacher referred moral valuations at last to the hypothetical "dispassionate observer." We have gone beyond this. We know that the most dispassionate individual possible would still be at best only a partial observer. We want to widen the appeal to a council of dispassionate observers. But our scientific criteria are now even more exacting than that. We want to insure not merely the checking up and the checking off of one observer's partialness by that of many others, but we want to insure as far as possible the correction of the collective partialness of all the observers by loyal deference to the reality observed.

In proposing a criterion of evaluation which is at first glance wholly incredible, I believe I have proposed something much more essentially scientific than any criterion in a form convenient for extraction of deductive conclusions. The most we can possibly know about the value of any range or kind or case of human conduct is the most that can be concluded about it by consensus of men measuring the conduct from all of its discoverable angles. The boast of science, ever since there has been a pretense of science, has been that it is the output of this all-sided endeavor. It has been, and it is, to the limit of our partially organized methods of investigation. Social science, at all events, has not yet used to the full the evaluating ability which is actually available for passing on the greater or less worth of accessible means for the present and future purposes of men.

In the estimate of science, not of special interests, evaluation of means for immediate ends must always be credible simply in the degree in which the minor valuation is held as a term in the scale of valuation of all ends, up to the largest and last that can be brought into human view. This valuation can never be essentially a matter of definition nor of category; although definitions and categories are always worth what they are worth as tools of inquiry and of control. The definitions and the categories, however, are merely symbols of the amount and kind of wisdom which the inquirers can bring to bear upon the particular problem. The real task in all evaluation is an appraisal of the time, place, degree, and manner of all the functionings concerned in the situation.

When we confront a real question, like the sample I have suggested, the problem is to shape up all the influences which one program exerts upon all the present interests of Americans, and to put the exhibit into comparison with an exhibit of all the influences which would be exerted by a possible alternative program. Then the evaluative question is, *Which collection and tendency of influences are more desirable for present Americans?*

In the last resort definitions do not, cannot, and should not decide such questions, even for academic science. Such answers as are in vogue at all are such approaches to consensus among scientists of different sorts as are arrived at by our present long-distance exchange of views between scientists. In the interest of scientific honesty, of scientific clearness, of scientific service, let us frankly conform our declarations and our practices to the facts.

It is not as though we were novices in the world. Experience has given us wide expanses of knowledge of the difference between good and evil in human conditions and in human practices. We have no need to disguise in sacramental phrase the literal procedure which is our wisest course toward more knowledge and richer experience.

The most reliable criterion of human values which science can propose would be the consensus of councils of scientists representing the largest possible variety of human interests, and co-operating to reduce their special judgments to a scale which would render their due to each of the interests in the total calculation.

This declaration of principles, and the program which it implies, would not be the abdication of science. It would be science stripped of cant. It would be science with its eyes open. It would be science with its decks cleared for action!

From this outlook there is nothing utopian whatsoever in anticipating the development of institutes of social science, composed not alone of academic men, by any means, but reinforced more and more by scientific men of action functioning as councils of elder statesmen, and focusing all the wisdom within human reach upon the conduct of men's affairs.

LECTURE IX

THE CONSTRUCTIVE PHASE OF SOCIAL SCIENCE

Something remains to be said on the subject of the last lecture. In the present lecture so much must be said about the relations of the evaluative phase of science to the constructive phase that it is necessary to have an understanding at the outset about the meaning of our words.

While I have referred to the evaluative process in a more general sense, I mean by it in particular the process by which students of social science arrive at social valuations.

By social valuations I mean judgments of desirable or undesirable social conditions or social procedures. My reservations in earlier lectures entitle me to restrict my use of these terms now to the relatively developed form of them which plays its part in general social science. The child begins to evaluate as soon as it begins to pay attention. The child begins to have valuations of things wanted or not wanted—things hard, that hurt; things soft, that soothe; things bright, that attract; things dull, that repel, etc. Before it is out of the cradle the child begins to have other kinds of valuations for ways to get the wanted things and to avoid the not-wanted things. From those likes and dislikes which are more reflex than rational up to the most complex philosophical judgments there are innumerable gradations of valuations within corresponding diameters of interest. I am confining myself now to those valuations of social desirability or undesirability which are arrived at by the most credible scientific methods that men control.

Still further, what I said in the last lecture applied more strictly to valuations of social ends, that is to conditions to be attained or avoided, than to valuations of social means, that is ways of attaining or avoiding the respective ends.

Although the subject of the present lecture is the constructive phase of social science, I shall make this aspect of the scientific process less prominent than further reference to the evaluative phase. This is primarily because academic people, whether they will or no, have relatively much more opportunity for influence upon the evaluative than upon the constructive scientific processes—at least upon the final stages of construction.

I would point out at once that in stages of social science in which construction is at the forefront the evaluative process falls into a secondary rôle, and is most active not in appraising ends but in selecting means to attain the ends.

It would require a treatise to show how this process functions in different combinations at different stages of generalization. To avoid confusion as far as possible I restrict my terms arbitrarily. For the present, therefore, I mean here and now by the evaluating phase of social science that part of it in which we arrive at judgments about things to be desired or avoided by groups or types of people, or judgments of means for attaining or avoiding those things. Those judgments themselves I call valuations.

Let me illustrate: The judgments now prevailing in England that it is good for Englishmen to have a hereditary upper house, an established church, ecclesiastical control of primary education, and a system of primogeniture; or with reference to American conditions the judgments that children should not be obliged to work for pay before a certain age; that such and such sanitary conditions should prevail in given occupations; that there should be a certain minimum wage for labor; that a certain number of cubic feet of space per occupant should be required in city dwellings; that there should be certain uniform marriage and divorce laws in all the states; that senators should be chosen by popular vote; that women should be admitted to the suffrage; that government should have a larger share in determining the rules of business, etc. I use these illustrations with no implication about their scientific credentials, and particularly without implying any opinion of my own as to the pros and cons with reference to a single one of them. Any one of these judgments, simply as such, whether it is valid or invalid, whether it is held by many or by few, is a specimen of what I mean by the term valuation.

I repeat that I do not assert either that we have or that we have not scientific conclusions in either of these premises. The subjects are merely taken as illustrations of conditions upon which scientific conclusions are desirable. So far as we have conclusions, they are valuations after their kind, as I now use the term. Moreover, assuming for the sake of illustration that we have such conclusions, whatever their import, *so far as one of those conclusions was arrived at as a result of conscious effort* the process of reaching that judgment is what I mean in the present connection by evaluation.

I hope a historical case will help to bring out the things that I want most to emphasize at this point. In 1814 two eminent professors of Roman law began a controversy which has its echoes still among legal theorists throughout the world. Thibaut at Heidelberg uttered an appeal for the construction of a national code for all Germans. If we apply our present terms in recalling the incident, Thibaut published the valuation that a national code would be a good thing for all Germans.

It is true that there is an element of construction in all evaluation. As there can be no construction except with the leverage of valuation, the man who does the work of evaluation must also be credited in the final account with some share in construction. German historians today would doubtless without exception agree in this sense that Thibaut did something toward initiating the influences which at last formed the imperial German code. I would certainly not dissent from this judgment.

So far as immediate and visible consequences were concerned, however, Thibaut simply reiterated his valuation, and with that his initiative shot its bolt.

Another and still more eminent man had a valuation which he promptly published in opposition to Thibaut. Savigny at Berlin did not directly deny the desirability of a national code for Germans. His procedure was rather an evaluation of the means available for producing such a code. In an elaborate argument, which is among the curiosities of social science, Savigny developed the proposition that Roman lawyers at a certain period were so uniquely endowed with a talent for jurisprudence that their work was not only a model for all time, but because of the inferior endowment of later men it must be accepted as settling rules of law for all time. That is, Savigny's valuation of the means for producing a German code was negative. With reference to popular construction of the sort desired by Thibaut, Savigny's valuation was in effect a negative valuation of the end itself.

Singularly enough neither of these scholars appeared to realize the full significance of the decisive factor in the situation. Thibaut may have been right that there was legal talent enough in Germany to produce a national code. Savigny may have been wrong in crediting Roman lawyers of two thousand years earlier with a monopoly of legal genius. They were both wrong in confining the question so narrowly to those considerations. The central fact was that the Germans were not a single state. They were scores of states. They had memories and theories of unity, but these overhanging shadows of nationality were in many ways more disturbing than harmonizing. The grim fact, more potent than all the theories, was that there could not be one code until there was one people. Before there could be a process of legal creation there must have been a process of social creation. A unified Germany was the necessary precondition of a unified code for Germany. Both these scholars knew this. Both referred to it. Neither of them, however, seemed to give it as much importance in his reckoning as even a half-fledged historical scholar would today find that it had in reality, if he inquired into the facts of the period.

I use this illustration here not merely to bring out the contrast between evaluation on the one hand and objective social construction on the other, but still further to hint at the usual limitations of academic men in connection with these two aspects of the scientific process. Please observe that I say "usual." I do not say invariable either in kind or degree. I shall presently speak more in detail about this matter.

So far as the actual work of organizing the social labor of founding a national German code was concerned, Thibaut reached his limit in standing for the valuation that such a code was desirable. With all his services for historical jurisprudence Savigny functioned in this connection on the whole as an arrester of construction. He stood for his negative valuation of the means available for the production of such a code.

Who then were the efficient constructors of the imperial German code now in force?

Why, in a word, the men from Blücher to Moltke who did the rough soldier work, and the other men summarized by the symbolic name of Bismarck who did the rough and the smooth work of diplomacy and statecraft, and the millions of unheralded men in all the industries who produced an economic unity which demanded political unity. Here then is a picture from life of the abstract distinction: *Evaluation in social science is a process of arriving at judgments about things worth doing and of ways of doing them; construction is a process of applying human forces to the doing of the things.*

I do not mean that German scholars had no more part in the process which reached the end of an epoch at Versailles in 1871. Isolating this incident of an early academic debate, however, it sharply silhouettes the distinction between evaluation and construction.

For further purposes of illustration, I cite a movement directly connected with the event just mentioned and with the situation referred to in the preceding illustration.

On October 6, 1872, a conference occurred at Eisenach which marks the launching of the most clearly defined, the most energetic, and the most comprehensive attempt ever successfully undertaken by academic men in the way of social construction. It was the first formal session of the *Verein für Socialpolitik.* The general purpose of the organization was described in the opening address as follows:

"First of all, it is our hope by co-operation to find a basis for the reform of our social conditions, to gain general acceptance of ideas which have long been held here and there but which have as yet not become decisive in public opinion."

In brief the primary purpose of the movement was to create and to crystallize public opinion in Germany in the direction of certain fundamental valuations held by the promoters. The ultimate purpose was to make this public opinion effective in molding the civic and economic policies of Germany.

The knowledge of the men best acquainted with this movement from the beginning until now would probably be overtaxed if they undertook precisely to distribute the work of the organization and of its individual members between our categories "evaluation" and "construction." I shall attempt nothing of the sort. I shall return to the illustration in a moment. At present I refer to the case as in many respects the most exemplary constructive enterprise that has ever been carried on by scholars in the social sciences. This is my particular point: Evaluation and construction were combined in the movement, but the emphasis—in the prospectus and in the subsequent program—has always been heavy upon the primary work of *planting valuations in the minds of Germans.* In my own judgment general experience and the experience of these particular men confirm the wisdom of this emphasis, as a model for social scientists as a rule. It certainly did not turn out to make the work of these men abortive. On the contrary, it would be a ludicrously superficial history of the new German empire which did not give prominence to the work of the *Verein für Socialpolitik.*

Selecting now another point of departure, I will use a series of detached propositions to define the viewpoint of this lecture:

1. The evaluative phase of social science is quite distinct in kind from the constructive phase.

2. Some sort of evaluation precedes construc-

tion, but construction does not necessarily succeed evaluation.

3. The investigator and the teacher as such have only restricted scope for changing social evaluation into social construction.

4. No general rules can define the duties of academic men with respect to the constructive phase of their own science.

5. Although social science is abortive unless social evaluation passes into corresponding social action, the work of individuals which stops in one of the preparatory phases of social science need not be abortive. Division of labor may provide for its continuation by other men.

6. No infallible means are known for transforming social valuations into corresponding social constructions.

I proceed to expand these propositions, though not in detail and not in the order just stated.

If the college students among whom I began twenty-nine years ago to practice my naïveté in history and economics had asked me whether it was the vocation of professors of social science to reform the world, I should without compunction have answered, Yes.

My present estimate of the service to be expected of academic men puts it no lower in degree than I should have rated it then; but I certainly classify the academic function now as chiefly differing in kind from that which I then assumed as a matter of course.

One of the most obvious limitations of the academic cast of mind is inability to distinguish between the evaluative and the creative phases of conduct. This trait registers itself in the complacency with which the academic man contemplates his valuations of social forces, as though there were no unbridged chasms between these appraisals and application of them. The academic man—and I am willing to be understood as a reluctant witness in a matter of personal experience—the academic man is apt to draw a sigh of righteous relief, as of one who has finished the course and kept the faith, when he thinks that he has justified the conclusion, for example, that an inheritance tax is right, or that the social evil should be treated in this or that way. Among the consequences of this fact is on the one hand too ready assumption by academic men that conclusions are reliable which have not satisfied the test of experience; and on the other hand too willing aloofness from the work of completing the scientific cycle by carrying on knowing and evaluating into doing. The academic man is prone to draw arbitrary lines for ranking purposes between theory and action. While he claims that so-called practical men have too little regard for science, it is quite as true that the academic man has too little regard for practice. When the practical man meets the academic man's valuation, I will not say with his blunt, "How do you know?" but with the equally incredulous, "What of it?" "What are you going to do with it?" or "What are you going to do about it?" the academic man is apt to reply by his attitude if not in so many words: "That is not my affair. Here is a truth which concerns you. Take it or leave it. My duty is done and my conscience is clear."

The emphasis of the present lecture is on the consideration that there is more "science" in the practical man's questions, "What of it?" "What are you going to do with it?" "What are you going to do about it?" than in the academic man's often implied answer. The scientific process is not completed in description, explanation, and evaluation. If there were no other reason, it would be enough that we have no right to regard our description, explanation, and evaluation as themselves complete until they have sustained the test of experiment. This test might disclose flaws at innumerable points in the earlier partial processes.

In arguing to this proposition I do not mean to imply that scientific men are bound to play a larger part directly in practical affairs. My point at present is rather that practical men, whether they are in academic positions or not, are bound to play a larger part in science.

To be perfectly clear I must explain myself a little further. Whether academic men may be more useful than they have been in activities beyond their proper academic scope is a question which I do not raise in this general form. Some individuals may be and properly. Some individuals may not be and quite as properly. Academic social scientists on the whole may function best, in some times and places, if they combine their academic duties in a much larger way than is the rule at present with their teaching and investigating functions. I am not now dealing with that problem. I bring no charge therefore against academic men for having had no more to do with "social reform," as that idea is generally understood in the modern literature of "muckraking" and "uplift." Indeed, if I were to make a complaint at all against American teachers of social science, it would be against those of their number who have been prematurely eager to influence social policies rather than too indifferent. Certain men have been over-ambitious to apply science which they did not have. They have thus discredited science in general. Our social science might have been farther advanced if all our investigators had kept both eyes constantly on their investigations, if there had been no one among them who kept one eye always and both eyes sometimes on a public more interested in schemes than in science. Those are most worthy of admiration among academic men who have the patience and the courage to put their whole strength into that for which they are chosen, that for which they are presumably best fitted and best equipped, namely, the purely pedagogical or investigative phases of science.

It is conceivable that our world might be a better world than it is if philosophers, men of theory, investigators were also the world's executive officers. Many men from Plato down have been of that opinion. I could not complain of Providence if academic men on the average exhibited more genius than they do for practical affairs. As things now stand, however, it appeals to me as a fortunate dispensation that there are people more efficient than academic men on the average in bringing things to pass. The moral which I would draw is not that academic men should neglect any work in which they might increase their usefulness without restricting their primary function, but that they should regard their academic work as presumably their main business, and should consequently in most cases be willing to fall into the rank of supporters instead of aiming to be leaders of actual execution.

The point at which I would begin to blame academic men, if it were necessary to select such a point, is not where their inevitable academic limitations begin, but where they slur over the meaning of those limitations for science itself, not to say for social practice in the more popular sense. That is, I blame social scientists if they assume that their scientific task is finished with their descriptions and analyses and evaluations. This attitude has too much in common with the old ecclesiastical distinction between the religious life and the secular. I blame social scientists if they fail to realize that turning valuations into action is not something subsequent to science but the normal completion of science.

For the purposes of the present argument, then, I am not asking what are the implications of the distinction between evaluative and constructive processes for the actual distribution of labor among academic men, or for the division of labor between academic and non-academic men. This question would require endless discussion of particular cases. Regardless of consequences one way or another in this respect, I am now emphasizing the fact that, within the body of science but over and above the descriptive, analytical, and evaluative functions of science, the constructive phase is the normal maturing of the whole.

In the fourth lecture I said that *the primary and chief function of science is to act as all men's proxy in finding out all that can be known about what sort of a world this is, and what we can do in it to make life most worth living.*

I must now add a clause to that statement.

Although life is functionally vicarious through and through, although it is made up of voluntary and involuntary services one for another, the closer we get to the completion of life at any point the more we find it to be less a matter of doing for one another than with one another. The intensest social functioning is not that of benefactor and beneficiary but of partner and partner.

I would carry this proposition over into the realm of social science. In the last analysis social science cannot be in the heads or the hands or the books of some men in trust for other men.

Social science has no way to complete itself except as the accomplished habit of human beings. The last phase of social science is the transmuting of valuations into life.

There is no infallible formula for this change. Indeed the big unsolved problem of the explanatory phase both of social science and of individual psychology is the mystery of the gap between knowing and doing. Individuals have often discoursed sagely upon the evils of idleness, of improvidence, and of licentiousness; yet some of the same individuals have ruined themselves by the very self-indulgence which their knowledge condemned. Probably more than a majority of the people in every civilized nation believe today that war is an immeasurable evil; yet each nation spends a fabulous sum annually in direct preparation for war—which is not inexplicable under the circumstances—but it is inexplicable that those same nations spend relatively nothing in direct assurance of peace.

As a phenomenon this is merely an illustration of the case discussed in the seventh lecture. Men always act because of valuations which they hold, and after the event the kind of action chosen shows which of their valuations prevailed. Before the event we cannot tell with certainty which of their valuations men will ratify in action and which they will disregard. Here therefore are frontier problems for individual and social psychology. All of us are anxious for more light on these problems. Meanwhile all the men whose division of labor is persuasion of children or adults to realize the more rather than the less reasonable valuations are in strenuous competition with all the drummers for the more pleasant rather than the more reasonable valuations. It is in the interest of scientific and human progress frankly to admit that we do not know very much about ways and means of inducing the choice of rationally preferable valuations.

For eleven years I lived in a beautifully situated and in many respects delightful New England college town of eight thousand inhabitants. Few towns in New England had greater natural advantages. Few, if any, could justly boast of residents on the average higher in the scale of intelligence and culture and morality. Yet, although the residence area of the town was rather more compactly occupied than is usual in towns of that type, there was not a sewer in its territory; nor was there a public water supply. No one knew to what extent his own well was a cesspool. For years, whenever the subject was alluded to, the valuations were affirmed and accepted as a matter of course that a water supply and a drainage system would be good things for the town. But that was the end of it; for a long term of years the valuations had no more energizing force, and rather less apparent prospect of passing into action, than the valuation of the same persons that sectarian jealousy ought not to exist.

This case was not a freak. It presents the ground pattern of all human situations after the evaluative stage of knowledge has been reached. The transition from the evaluative to the creative stage may be instantaneous. It may not be completed in millennia. Our knowledge of probabilities, and of ways and means of realizing the possibilities of converting the one phase into the other is extremely provincial and inexact. This, however, is the kind of knowledge which is most in demand, and most difficult to get, of all the phases of knowledge involved in the complete process of social science. How may the only child in a family be led to form the habits prescribed by the family valuations? How may an additional valuation held by wise men in many nations gain lodgment in our international code? At bottom the problem is the same at the two extremes. The man or the group that has a valuation, and wants to be not merely an evaluator but a realizer, faces the same uncertainty, whatever the type of problem. Be the individual teacher, preacher, editor, politician, legislator, reformer, or whatever, each man who wants to induce other men to convert a valuation into a condition faces a distinct task of overcoming mental inertia. There is no sure way of measuring that inertia, nor of applying a force sufficient to overcome it. There will be more or less exact precedents for the case. There will be much or little experience in similar cases to furnish useful guidance. The experience may have been so accurately observed and statistically tabulated that certain probabilities of success in using certain means may be anticipated. Yet after all each attempt of men to induce a constructive effort by an individual or by a group has to take its own chances with an inscrutable hiatus between valuation and volition. Each social constructor virtually makes the same appeal to his public which St. Paul made to the church at Philippi: "If you know any things that are true, honorable, just, pure, lovable, or respectable, in the name of all that is virtuous and praiseworthy apply your minds to these things."

It may turn out that this initial difficulty of securing attention is nine-tenths of the whole creative problem. We may find that the psychological statement of the problems of social reconstruction will reduce each of them to the technique of concentrating attention. Whether this is true or not, the stake that we must drive down at this point marks the fact that valuations do not realize themselves. There is the same difference between valuations and corresponding social conditions that there is between a conclusion that a trip around the world would pay, and actually making the journey.

If I were to be held strictly accountable for a list of "valuations," in the sense in which I have defined the term, particularly if I meant valuations both scientifically established and generally accepted, I confess the catalogue would be short and unpretentious. We may claim to have scientifically justified considerable systems of technique for operating our existing industrial, political, legal, educational, and religious institutions. Of course this technique is largely on trial, and the conditions within which it functions are so fluid that modifications of the technique are in constant progress. Outside of these technologies, and excluding mere formulations of existing conditions, all our social sciences together have not yet established very many available conclusions by unassailable logical processes. When we approach the point where social science should deliver its results for practice we have to admit, if we are honest, that such science in the completest sense does not exist. In its place we have merely an unrealized ideal. The conditions necessary for achieving the ideal in any precise degree are far beyond the present reach of human powers.

What follows? Does everything that I have said go for nothing? Is all the effort of all our so-called social sciences mere useless parade? Have we no basis at all for constructive social action?

I think we have a very broad and deep basis, a basis on which constructive social scientists may stand firm. But we shall not find our footing until we have freed ourselves of unscientific sectarianism on the one hand and of unscientific pretentiousness on the other.

By unscientific sectarianism I mean the folly of our jealous academic tradition of the separateness and self-sufficiency of our perfunctory divisions of science. By unscientific pretentiousness I mean persistence in deluding ourselves, although we deceive no one else, with the fiction that our scientific structure already conforms to its ideals.

With these qualifications we are justified as social scientists in an assured and aggressive attitude toward our share of men's tasks. Just where our attainments stand in the scale of final logical analysis is an impertinent question when we are concerned with the creative phase of social conduct. I have said that social conduct and the creative phase of social science should be identical. That is, in their objective completion social science and social action are ideally and practically convergent. Social science has all the rational apparatus and material which human experience has developed as its equipment for social partnership. If it cannot bring an infallible factor into the problems of plain men it may bring to each one of those problems, from the primary perplexities of the household up to the last question of international relations, all the rational aids to judgment which the experience of all men together has assembled. To ask more would be preposterous.

Nor need we go far away in time or space for pattern instances of co-operative work between academic men and non-academic men in constructive social science. The cases in point are not confined to Germany by any means. Not to speak of the splendid work of social construction carried on by men and women in other than academic positions—Miss Addams is one of the best illustrations—we have already in this country an inspiring tradition of the constructive combination of social reason and social practice by academic men.

In Wisconsin, for instance, Professors McCarthy, Meyer, and Reinsch have been giving academic men a new vision of their opportunities by their services to the state in connection with the administration of railroads, and in preparation of legislative bills on many subjects. In our own faculty Professors Freund, Henderson, and Merriam not only have proposed valuations but they have been initiators of constructive action in the city council, in the legislature, and in many business concerns. They have turned knowledge that has been derived from all men's experience to immediate practical use. They have modified our actual dealings with the criminal and the dependent. They have changed standards and conduct with reference to occupational diseases. They have contributed to a solution of the labor question by promoting industrial insurance. They have done much to make the city government more efficient and more honest. Professors Tufts and Mead have done similar work in connection with the City Club, and Professor Jordan also in promoting public hygiene.

The point which I want most to urge is that, although social scientists cannot very often reduce their judgments to absolute scientific demonstration, *the sort of knowledge which they control has a moral backing that amounts to a sight draft upon the co-operation of right-minded men.* A moral infant or a moral pervert may deny that the conditions discovered by the "Pittsburgh survey" constitute a demand for concerted action by Americans, from those most responsible and most able to discharge their responsibility to those least responsible and least able to discharge their responsibility. No morally normal man can take refuge in that kind of sophistry against the force of the facts. This instance is typical of the moral situation throughout the field of social science. With varying degrees of precision according to the situation in question, we may claim morally incontestable scientific sanction for programs of social construction that range from insurance of decent conditions of life for every willing worker to abolition of war and humanizing co-operation between all civilized men.

Recurring once more to the *Verein für Socialpolitik,* I would emphasize in the second place the judgment which I expressed in the beginning, viz.: Whatever may have been the service of those German scholars in the way of actual social construction—and the balance sheet of this account has not yet been drawn up—their other kind of service is likely to be, for a long time to come if not always, the more instructive precedent for American academic men.

By teaching, by addressing many different types of audience, by systematic publication, the members of the organization changed the valuations of Germans both about social means and about social ends. Whatever we in America may think of these valuations in themselves, they have actually been wrought into the fabric of German life.

In general a parallel relation to the entire social task must be assumed as the primary calling of American academic men. Whatever we may be able to do more must be regarded as the "good measure pressed down and heaped together" which most academic men are only too anxious to give in full discharge of their stewardship.

Our first and largest function as academic men must always be to help our fellow-men find out what is true, and honorable, and just, and pure, and lovable, and reputable. We shall at least have done a necessary part if we do no more than keep attention fixed on these things, while other men are doing the subsequent work of more directly making these valuations bear the ripened fruits of action.

LECTURE X

THE FUTURE OF SOCIAL SCIENCE

The subject of this lecture seems to threaten prophecy. In substance it will be résumé, profession of faith, and exhortation, after the good old homiletical pattern.

Our generation is witness that the case MEN VERSUS MEN'S PROBLEMS has taken a change of venue from the theological court to the sociological. The good man who sits in the seat by courtesy called St. Peter's is the most plaintive evidence of this transfer. What could more surely provoke Olympian laughter than combination of claim to doctrinal infallibility with calls for intellectual castration, in encyclicals that command men to find truth not in progressive study of the human lot but in return to St. Charles Borromeo! Regret that "modernism" is here, and edicts to resist it, might as well be grief that the present geologic age is not the Paleozoic.

In calling attention to the fact that modern criteria of truth are not theological but sociological, I do not of course use either term in the special academic sense. The theology of all modernists is progressively sociological, and by the latter term I refer in this connection not to a special academic division of labor but to the whole large method of social science. *This method is throughout objective investigation and evaluation of human experience, with the purpose of constructing valuations into more complete realizations.*

The man with broken bones needs the surgeon. The man striken with fever needs nurse and physician. The man with shattered nerves needs the neurologist. There are phases and stages of social development—whether normal or pathological need not be asked for our present purpose—in which demoniacal or theological practice is indicated for minds distressed. If men believe in evil spirits and fear them, the sorcerer and the magician are the natural recourse. If men believe in a divinity thirsty for human blood and fear him, as in the stage symbolized by the story of Abraham and Isaac, then the flaming altar and the human sacrifice meet the spiritual need. If men believe in the God of mediaeval western theology and fear him, then subjection to dogmas supposed to have been committed to his special agents is the only solace and insurance.

In fact, however, a differentiation is inevitable in the moral world analogous with that in the physical world. Organic life does not remain vegetable alone. It does not stop with mollusks. While vegetable life of very low orders remains, while mollusks survive, the flora and fauna of the earth develop in countless forms. Along with plants which can scarcely be distinguished from inorganic matter and animals which might easily be mistaken for plants, we have side by side the ascending orders of vegetable and animal species including every variety of men.

Accordingly there are still men to whom no higher appeal can be made than that of magic. There are others who feel no mental nor moral suasion beyond that of dogma. There are still others to whom dogma is only a more pretentious magic; to whom the observable processes of the physical and moral world are the final recourse for expansion and correction of the provisional knowledge and valuation with which each generation takes up the destiny partially worked out by all who have gone before.

We do not know whether the time will ever come when all the men living on this planet will be freed from the superstitions and the fears for which magic and dogma are the appropriate prescription. We do not know that the time will ever come when men's knowledge of what is good in their situation, and men's visions of unrealized valuations will supersede all less rational controllers of their conduct. The trend of social science, however, the spirit of "modernism," the outreachings of plain men's desires wherever they are unfettered enough to be genuine, all make strongly and at last consciously toward this goal.

I do not say and I do not think that social science can ever be a substitute for religion. It is getting plainer and plainer, however, that social science, in the sense in which I have used the term in these lectures, is the only rational body for religion.

No man has lived his life to the full who is not at last, in one preserve of his personality, a mystic. It is a grub's life not to feel out after the connections of what we can know with what we cannot know; after the fulfilment of what we have been or might have been in what we may be. From first to last religions have been men's more or less conscious attempts to give finite life its infinite rating. Science can never be an enemy of religion. Stop the stress and strain, the rush and roar, the fuss and bluff of modern life long enough for the deeply human in us to have its chance, and the more science we have the more are we awed and lured by the mystery beyond our ken; the more do the unsatisfied longings in us yearn for larger interpretation.

And this is the heart of religion. It is the investment of such values as we have along with the best labor within our power to make them productive. We have no other scope for this work but in our intercourse with our fellow-men. In this view social science carried into the creative stage is the only conceivable body in which religion can be vital.

Theological religions have always been ungenuine because they have made the mystical the key to the real. The religion of social science will make the real the key to the mystical. While men are bound to achieve this inversion in proportion as they become sophisticated, while men are bound in proportion as they conquer ignorance and banish terrors of their own invention to find the meaning of life less in escaping unknown evils than in realizing known goods, it does not follow that they are bound to limit the meaning of their lives to the measure of experience. On the contrary, the more we compare the span of experience with the sweep of mystery within which we are inclosed the more certainly will our known life borrow some of its value from our thought of the infinite unknown.

This again is merely a modern way of expressing a reality of religion which in some degree the most spiritually minded men of all faiths have held in common.

In all seriousness then, and with careful weighing of my words, I register my belief that social science is the holiest sacrament open to men. It is the holiest because it is the wholest career within the terms of human life. Restraining myself from prediction, and holding strictly to confession, I am able to foresee no other development for religion than the progressive sloughing off of its ritualistic attachments and corresponding enrichment of its realistic content. The whole circumference of social science is the indicated field for those "works" without which the apostle of "salvation by faith" declared that faith is dead.

Throughout these lectures I have repeatedly expressed or implied a conception of the scope of academic social science which may be compared with the function of the "sailing master," if there still is an officer of that title upon a battleship. Someone must be responsible for all the calculations upon which the navigation of the ship is based. Perhaps a better parallel would be the officers and directors of an industrial plant. They must know as much as possible about the actual and conceivable conditions of demand for their product and about the actual and conceivable limitations of their ability to supply the demand. If the operatives in the plant were as free to use or disuse the conclusions of the officers and directors as men in general are to do what they please with formulations of social science, the likeness would be more exact.

To describe this situation literally: Men are born into a physical and a social process which sets their task and circumscribes their destiny. Whether particular men ever become conscious of it or not, the experience of men in general has always been first of all assumption of a scale of meanings to be credited to the surroundings, and adoption of a corresponding scale of valuations assigned to alternatives of conduct in view of these meanings. The process of arriving at these interpretations has mounted from scarcely more than vegetative adaptation to habitat up to historical conflicts of ideas and civilizations. The intellectual reflection of this process has varied from folklore to philosophy. Social science is that part of the activity of modern men which is charged with the function of investigating these social meanings and social values with all the apparatus which present knowledge can devise and which present resources can supply.

Throughout these lectures I have treated these investigations of social meanings and social values as the crowning function of social science in its strictly academic aspects. Leaving the creative phase of social science out of view for the moment, the functions of social description, analysis, and evaluation are the pre-conditions of social construction upon a basis of reason corresponding with the complexity of present social conditions. In this sense and to this extent, therefore, the objective social process will be irrational, or at best incompletely reasoned, unless the indicated academic processes are performed by social science.

For instance, in recent years we have become familiar with variations of the proposition that the aims of modern men have turned wealth, which is only a means, into the paramount end. Both Simmel and Sombart have made out strong cases in support of this proposition. In so far as the assertion is true, it involves the corresponding proposition that our modern program degrades men from their appropriate place as ends and reduces them to the rank of means.

There is probably no more urgent need among civilized men at this moment than knowledge of the precise situation referred to in these propositions. Are we geared into a machinery which is grinding out the bankruptcy of civilization by consuming men as its raw material and giving back only wealth as its output? Or are we progressively sublimating our wealth in superior types of human beings and social conditions?

Surely civilizations never consciously confronted a more vital question about their own condition than these propositions present to thinking men the world over today. *Are we consuming more human values in making our wealth than are given back in the making and the using?*

Not a few men who are inclined to treat mere repetition of the question as an offense against society have no doubt that something like the mistake alleged was the fault of earlier civilizations. It is comparatively easy to look back now and to detect the oncoming of social bankruptcies in the régimes of fist-law, of military exploitation, of absolutism, of chattel slavery. It is very hard for men who have nothing to gain and possibly much to lose by unfavorable social diagnosis calmly to entertain the thought that their own civilization may possibly be attempting to perpetuate a social fallacy.

Who shall pass upon this question? Who shall determine whether or not there is a case against our capitalistic civilization? Who shall decide whether we are moving toward the apotheosis of wealth or the apotheosis of men? Shall we leave it to the *ex-parte* judgment of capitalistic interests, or shall we refer it to the most judicial commission of inquiry which it would be possible to establish? Could a more competent commission be proposed than such an institute of social science as we have imagined, or ultimately a chain of such institutes correcting one another in all the civilized nations?

In thus reiterating that investigation is the fundamental function of social science, I admit that there are other important functions of social sciences, but I insist that all their importance is secondary to that service by which they open the way to larger realizations of life. By "larger realizations of life" I mean not merely richer mental furnishings of individuals, but more purposeful and more extensive functionings between individuals in developing superior types of association.

I noticed in passing that some men extol history not as science but as art. I might have said that less frequently the other social sciences are appraised highest when treated as arts. This does not mean that the men who so judge are referring to the ultimate utility of these sciences in molding social conduct. It means that these men are thinking of the mental and literary technique which may be developed in handling the material of these sciences. The people who think in this way remind me of the types whose first interest in an opera or an athletic contest or a stock show or a social settlement is in its features as a "society" affair. Whether an opera or an athletic contest or a stock show or a social settlement is worth supporting, is a question by itself; but to use either as a mere occasion for social preenings, for the display of ability to out-waste and out-pose one's social rivals, rather insolently begs the question. The subject-matter of the social sciences lends itself to artistic treatment to be sure, but no one with a sane sense of proportion will imagine that such treatment is first in importance. Engage the social sciences if you will as caterers to your aesthetic demands; but have the decency when you do so to list them where they belong—in the class with the dance and the drama.

Again, as I have observed, it is very hard to get attention to social science beyond the demands of school curricula. Far be it from me to belittle the educational uses of social science. It seems to me as inevitable as it is desirable that all our education, from the kindergarten up, must grow more and more sociological in a sense derived from that in which I used the term in connection with religion. Our schooling will increase in value in proportion as it sophisticates us in the literal processes of life. But after all how naïve and partial our knowledge of any social reality is at best, even after we have received all that the schools can give! A forenoon in an editorial office or a grand jury room or a directors' meeting, an evening in a precinct caucus or a city council or a state or national legislature, would be below the average in action, if it did not contain enough that he had never thought of to make the most intelligent Doctor of Philosophy in social science conscious of gaps in his knowledge. The academic phases of social science are valuable not so much for the information about life which they impart, as for the ability to learn about life which they develop, and for the conviction of the importance of finding out about life which they stimulate. Social science would be little more than mental gymnastics for adolescents if its pedagogical uses contained its chief value.

No! Social science is not an adolescent but an adult function!

We are just beginning to emerge from the semi-conscious juvenile stage of social self-knowledge. We have taken many hasty and partial inventories of social assets. We have ventured numerous limited social experiments. Some of these have been rash, some timid, all relatively superficial. They have revealed no large mature conception of social destiny. If they have been occasionally ambitious and general in their proclamations, they have at the same time been vague and fatuous in their details. Our contemporary social science as a whole roughly resembles the individual consciousness of the typical college boy three months after graduation. The glamor of being a Senior has passed into the gloom of doubt about ability to get a grip on the world. The general life of men which from the undergraduate standpoint seemed a stupid simplicity, to be settled with in a few patronizing phrases, has become complex and unwieldy. It is big, puzzling, and noncommittal.

It has not yet fairly dawned on the thought of the world that human life is not an affair of a few homely classifications. To be born; to be nursed from a puling babe to a bawling brat; to be taught the commonplace lore of life; to find one's job; to mate; to propagate one's kind; to keep up the motions of one's group; to gather a few passing gratifications; to die—these are not the dimensions of human destiny.

Men are in at the early stages of an enterprise which has no limits that human knowledge can discover. Certain hither landmarks we can fix, but the outbound movement of human experience projects an orbit that we have no power to calculate.

The human race has a material endowment which is beyond our means of appraisal. We have developed a fairly prophetic technique for extracting nature's wealths. We have sampled the treasures at our command, and we have assured ourselves that completer control of them is within our reach. These supplies, these materials, these energies, these efficiencies are the social inheritance, along with the rudimentary apparatus, from alphabet and multiplication table to our engineerings and our traffickings and our legislatings, by which we have conducted ourselves thus far in our pioneering.

In a meager way too we have tried out personal capacities. We have taken preliminary measures of bodily strength and skill. We have shown ability to endure and to perform up to certain marks.

In like casual fashion we have tested sample men's intellectual competence. We have gained certain provisional experiences about what men can do with their minds when they devote themselves to mental effort. We have achieved certain grades of mental value of many types, from Euclid to Edison, from Aesculapius to Koch, from Homer to Goethe.

More than this, we have discovered moral strengths. We have not only learned in our life apprenticeship that certain qualities of conduct which we call virtues are good for those who have the use of them, but we have found that men actually have it in them to achieve these qualities. Men may be patient, and industrious, and strenuous, and dependable, and considerate, and tolerant, and steadfast, and generous, and enterprising. They may not only develop these values to a degree that cements family relations and harmonizes community intercourse, but in some men one or more of these values may be so large that they bless races, nations, generations.

We have even made beginnings in *social* achievement in the strict sense. We have discovered rudimentary abilities to co-operate. We have found ourselves justifying ourselves to ourselves when we have formed large and durable associations. We have found our horizon widening and the measure of realization enlarging as we have become members one of another in more elaborate interdependencies. We have discovered that values which we prize may be gained by men in organization which could not be achieved by men as individuals.

"And it doth not yet appear what we shall be!" In youthful exuberance, stimulated by some of these first samples from the vintage of human experience, men have pictured Utopias as the goal of social endeavor. This is the world's Sophomorism. Not Utopia-painting but social edification is the task of maturing men; and social science is the methodology of that task. Our human situation indicates not the duty of fitting our conduct into certain preordained categories, but the opportunity to work out the possibilities latent in the resources which we have sampled.

Our outlook is over an uncharted future in which men may employ their intelligence more and more economically to realize the attainable in all the directions into which our experience thus far has given us glimpses. It is not men's business to determine in advance what manner of men or what type of society will be ultimate. It is our destiny to conserve those human values which we are at present able to appreciate, and to combine our energies to the end of refining those values and making them more general, while we continue the immemorial process of discovering and realizing further values

If a sound, strong, skilful body is good for anyone, there can be no social wisdom which slights the basic businesses whose function is to secure the conditions of life in which sound, strong, skilful bodies will be the rule for the largest possible proportion of men and women.

If intellectual force, and grasp, and poise, and penetration are good for anybody, they must be counted as parts of the outfit with which it must be the program of life to equip as fully as possible steadily increasing quotas of human beings.

If the qualities that we call virtues, the dispositions and the attitudes toward one another in which men recognize one another's worth and respond to one another's needs, are good for anybody, then it is an abortive human condition in which these qualities are exceptional. It is a state of arrested development if these human values are mostly dissociated, some achieved by one individual, some by another, and seldom harmoniously constructed into a single personality. Life will begin to be mature only when these elements of human value are relatively universal. Our human task is therefore, in one more detail, intelligent cultivation of the basic virtues. And this implies that human wisdom must compass the means within men's reach of establishing conditions most favorable to the development of the basic virtues.

If all this and this only were provided for literally in accordance with the schedule, men would still be merely in the pre-creative stage of social destiny. It would be the period of nebulous star-stuff, unformed and void, before the atoms had begun to arrange themselves into worlds.

Fortunately men come to consciousness in a later evolutionary stage than this. We know nothing of an utterly non-social condition. So far as our knowledge goes men are never literally individuals. Within narrower or wider diameters they are always dependents on one another, and even in some degree functions of one another. The social task is at last to find the utmost attainable terms of this human interdependence, not as limitation but as endowment. How may we co-operate in such ways that the values which we have learned to appreciate may be most abundant, most diffused, most intelligently rated for what they are at any moment worth as ends, most rationally employed for what they are at the same time worth as means? How may we help one another best to visualize as much of the common enterprise as comes within the range of human understanding? How may we consent with one another to make our individual valuations and programs constructive elements in the total human process? How may we combine with one another in such ways that each of us will individually achieve and realize most when he is counting most toward the common enterprise?

Here is the largest problem of social science, and the literal business of scholars is to make this rendering of men's destiny the broad survey within which they will organize their special tasks.

Science then is not at last to the specialist but to the humanist. Science is the intellectual machinery by use of which the whole physical, mental, and social destiny of mankind is to proceed.

The situation recalls us once more then to the main motive of these lectures, namely, *the unity of social science.*

Perhaps my account of the tasks of social science seems to leave only the alternatives—either abandonment of the attempt to be a social scientist, because the demands of social science so far exceed the powers of a single mind, and because we have no sufficient organization of social science to supplement the efforts of individuals, or adoption of a narrower and lower ideal.

I certainly have stated the demands of social science in terms that place it beyond the control of a single mind. My own conclusion is not that the ambitious student of human life must give up in despair, or resign himself to the rôle of a dabbler in social details without effort to find their relations. My conclusion is that the most isolated student of social science, the one most confined to some partial and primary phase of human experience, may help more than he could otherwise to promote the maturing of the social process if he will place himself within the perspective drawn by this conception of human destiny and of the science of human experience. One may steady one's own course both as a thinker and as a doer, and one may be a more competent guide of others, simply by refusing to let a single kind of specialist in social science mold one's description or interpretation or evaluation of any passage of experience. If you call yourself a historian, do not let historians only, still less historians of a single type, predetermine your conclusions about any portion of experience which you may study. Read the historians of course, but read too the economists about their interests in the same experience. The chances are that they will modify your views of the relations involved, if you had gained them solely from historians. Read the political scientists, sociologists, social psychologists, and moralists on the same situation. You will not arrive by this process at conclusive results, but you will arrive at qualitative perceptions which will contain more balanced estimate of the human reality presented by the experience than you could arrive at by equal time and energy expended along the line of a single abstraction.

I have not asserted and I do not intend to assert that the only knowledge of experience worth having is the science of experience as I have projected it. I have been rehearsing some of the things which we must reckon with if science in the larger sense of the word is our end. One may be a faithful mother without being a physiologist. One may be a good housekeeper without being a chemist. One may be a merchant or manufacturer without being a political economist. One may also be a valuable citizen without being a social scientist.

Each of the types just named may have developed a very circumstantial theory of its own particular sphere of action. Each of these theories may furthermore be a respectable fragment of science; or at least it may be an arrangement of a body of knowledge which would be useful material to be worked into comprehensive science. These arrangements of knowledge for specific uses in particular circumstances are worth what they are worth; and I undertake no comparison of their worth with that of the comprehensive science of society which I have described, still less disparagement of them in their appropriate function. I simply point out that they are not social science in the largest sense, and that I am not dealing with these non-scientific goods. I am concerned with the prospectus of the most comprehensive science of society which it is reasonable to project.

But I must repeat my plea for the ideal of social science not merely as a career for mature men, but as a vocation now so clearly defined that it calls for combinations of large numbers of the best equipped men to carry on the tasks of social science in co-operation.

In the reply to Treitschke, which in some respects bears the same relation to the social policy of the new German empire which Luther's theses bore to the Reformation, Schmoller sounded this one discordant note: "Science is always genuinely promoted only through individual investigation."

Collectivism was the patrimony of the Germans. On the whole, Germans have always acted from collectivistic principles, first within their petty principalities, then since 1872 in their united empire. There was a period, however, which we may place between the dates 1812 and 1872, when the normal development of their theories in social science was embarrassed by an intermixture of thoroughly exotic individualism. Schmoller was virtually demanding the return of German social science to first principles. It is therefore the more astonishing that, in the very argument in which he is contending for social and civic co-operation as the only morality, he seemed to assert that individualism in science is a matter of course.

In point of fact there never has been more individualism, in the sense of isolated research, in German science than there has been individualism, in the sense of uncorrelated public action, in German civic life. While there has been comparatively little closely organized research on a large scale, it is also true that publication in Germany has been so inexpensive that every investigator in every science in Germany for the last century has virtually carried on his work under the stimulus and correction of all other investigators in all other sciences. That which German scholars more than any others have done well without close co-operation I hope American scholars at no distant day will begin to do better by means of the sort of co-operation which I have suggested in these lectures.[1]

I would not if I could fuse all social scientists nor even all of a single social scientist into an impersonal investigating medium. I would not extinguish scholarly individuality in an institute of social science in which men would be merely so many cogs in a scientific machine. I would not if I could organize a scientific society able to absorb all of each investigator's personality into its corporate program. I am yearning for no socialistic foreordination of mediocrity. Science can enjoy full health only with plenty of latitude for individual initiative in research. Scholars must have all the liberty they can use to run down clues of their own. On the other hand, scientific health will never develop maximum scientific strength till organization of research fully recognizes as the law of science, as of the rest of life, that "we are members one of another."

Of all President Harper's published addresses the one which reveals most of his appraisal of the function of education, and most of his aspirations as a university builder, is entitled "The University and Democracy." If I might substitute for the word *university* the term *social science,* which I have been discussing, I might say that in spirit if not in detail Dr. Harper's words anticipated all that has been said in this course about the mission of social science. I close then with another rendering of my own thought, especially the thought emphasized in the last lecture, in Dr. Harper's words:

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[1] It is worth recording that twenty-four years later, in his inaugural address as Rektor of the University of Berlin, Schmoller also emphasized the co-operative side of research.

> As a student, for many years, of the Old Testament, the thoughts and the forms of thought of the ancient Hebrews have made deep impressions on my mind. In the course of their long-continued history they passed through nearly every form of life, from that of savages to that of highest civilization, and they lived under nearly every form of government, from the patriarchal, through the tribal, the monarchical, and the hierarchical. The history of no other nation furnishes parallels of so varied or so suggestive a character. I beg the privilege of drawing my form of expression from their history; and I do so with the more interest because, to all men who have religious sympathies, whether Jew or Christian, whether Roman Catholic or Protestant, these forms of expression are familiar, and by all they are held sacred.
>
> Democracy has been given a mission to the world, and it is of no uncertain character. I wish to show that the university is the *prophet*—that is, the *spokesman*—of democracy. Democracy, if it continue, must include the masses and maintain their sympathy and interest. . . .

The truth is, democracy has scarcely yet begun to understand itself. It is comparatively so young and untried, and the real experiment has been of so short a duration that it could not be otherwise. Democracy needs teachers who shall say, *know thyself;* messengers who shall bring light to shine upon dark places. There is great danger that the next step, at any time, may be a wrong step. Some such have already been taken; and history shows the terrible cost of being compelled to go back and start anew. Democracy is now able to walk alone, but not infrequently something occurs which leads us to think that there has not yet been time enough to learn how a fair and even balance may at all times be maintained. . . . .

Democracy surely has a mission; and if so, that mission is, in a word, *righteousness.* It is an interesting fact that all the great religious truths were worked out in the *popular* mind before they were formulated by the thinkers. The world is waiting for the working out of the doctrine of national righteousness through democracy, and no effort to formulate the doctrine beforehand will avail. But the day is coming when the thought will have become tangible enough to be expressed. The popular mind will not be able to do this service. The *prophet,* whose discerning eye reads the thought in the heart of democracy itself, expressed in heart throbs reaching to the very depths of human experience—the prophet, I say, will then formulate the thinking which will make earth indeed a paradise. . . . .

The *university* is the prophet who is to hold high the great ideal of democracy, its mission for righteousness; and by repeated formulation of the ideal, by repeated presentations of its claims, make it possible for the people to realize in tangible form the thought which has come up from their deepest heart. The university, I maintain, is the prophetic interpreter of democracy; the prophet of the *past,* in all its vicissitudes; the prophet of the *present* in all its complexity; the prophet of the *future* in all its possibilities. . . .

The university is (second) a *priest,* established to act as mediator in the religion of democracy, wherever mediation may be possible; established to lead the souls of men and nations into close communication with the common soul of all humanity; established to stand apart from other institutions, and at the same time to mingle closely with the constituent elements of the people; established to introduce whosoever will into the mysteries of the past and present, whether solved or still unsolved.

Among the priests of olden times some groveled about in the mire of covetousness and pollution, encouraging men to sin that they (the priests) might have the sin-offering; some were perfunctory *officials,* with whom the letter of service was all-sufficient; some were true mediators between man and God, and teachers of the holiest truths; some of them in their ministrations of divine things reached so near to God himself as to exhibit in their lives and thoughts the very essence of divinity.

It is just so with universities. Some are deaf to the cry of suffering humanity; some are exclusive and shut up within themselves; but the true university, the university of the future, is one the motto of which will be: *Service for mankind, wherever mankind is, whether within scholastic walls or without those walls and in the world at large. . . .*

I have not forgotten that the Old Testament Messiah was expected to be not only a prophet, a priest, and a sage, but also a king. But the representation as king was only an adaptation to the monarchy under which the idea had its birth. When he came, he was no king in any sense that had been expected. His was a democratic spirit; democracy has no place for a king. The dream of the Old Testament Theocracy was of this Messiah, the expected one, by whose hand wrong should be set right, the high ones cast down, the lowly lifted up. And all the while prophets and priests and sages were living and working and hastening forward the realization of this magnificent ideal.

Now let the dream of democracy be likewise of that expected one; this time an expected *agency* which, in union with all others, will usher in the dawn of the day when the universal brotherhood of man will be understood and accepted by all men. Meanwhile the universities here and there, in the new world and in the old, the university men who occupy high places throughout the earth; the university spirit which, with every decade, dominates the world more fully, will be doing the work of the prophet, the priest, and the philosopher of democracy, and will continue to do that work until it shall be finished, until a purified and exalted democracy shall have become universal.

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